

## Supplementary Appendix

This appendix has been provided by the authors to give readers additional information about their work.

Supplement to: Katon WJ, Lin EHB, Von Korff M, et al. Collaborative care for patients with depression and chronic illnesses. N Engl J Med 2010;363:2611-20.

## Appendix 1

### ICD-9 Codes for Diabetes

All ICD-9 250 codes

Diabetes Mellitus

### ICD-9 and CPT Codes for CHD

ICD-9 codes 410-414

410	Acute Myocardial Infarction
411	Other Acute and subacute forms of Ischemic Heart Disease
412	Old Myocardial Infarction
413	Angina Pectoris
414	Other forms of Chronic Ischemic Heart Disease

ICD-9 procedure codes

00.66 PTCA/Atherectomy

36.xx Operations on Vessels of Heart

36 CPT codes for coronary vessel procedures: 33510 to 33523, 33533 to 33536, 33572, 92973 to 92975, 92977, 92980 – 92982, 92984, 92995, and 92996

33510	CABG, Vein, Single
33511	CABG, Vein, Two
33512	CABG, Vein, Three
33513	CABG, Vein, Four
33514	CABG, Vein, Five
33516	CABG, Vein, Six or more
33517	CABG, Artery-Vein, Single
33518	CABG, Artery-Vein, Two
33519	CABG, Artery-Vein, Three
33520	CABG
33521	CABG, Artery-Vein, Four
33522	CABG, Artery-Vein, Five
33523	CABG, Artery-Vein, Six or more
33533	CABG, Arterial, Single
33534	CABG, Arterial, Two
33535	CABG, Arterial, Three
33536	CABG, Arterial, Four or More
33572	Open Coronary Endarterectomy
92973	Percutaneous transluminal Coronary Thrombectomy
92975	Thrombolysis, coronary; by intracoronary infusion
92977	Thrombolysis, coronary; by intravenous infusion

92980	Transcatheter placement of an intracoronary stent(s)
92981	Transcatheter placement of an intracoronary stent(s)
92982	Coronary artery dilation
92984	Coronary artery dilation
92995	Coronary atherectomy
92996	Coronary atherectomy add-on

## **Appendix 2: Education Materials for Care Managers and Patients\***

### **Table of Contents**

Improving Medication Adherence

Treatment of Depression

Making Motivational Interviewing Real

Outreach

Patient Centered Counseling for Physical Inactivity

Inactive Patients who Self-Report

Physical Activity Plan

Problem-Solving Treatment Approaches to Behavioral Activation

Description of Problem-Solving Treatment Method

TEAMcare Study Session Outline

Tools for Managing Your Chronic Disease Booklet

\*Weekly case reviews and supervision by physicians are crucial for training and intervention success.

## Improving Medication Adherence

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*Chronic Illnesses and Depression*

## Non-Adherence Depressed vs. Non-depressed

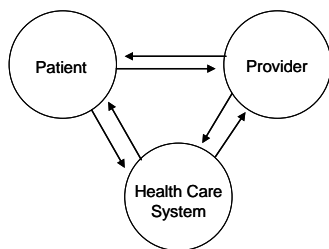
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Non-Adherence	Not Depressed	Major Depression	P
Oral Hypoglycemic	18.8%	24.5%	<0.05
Lipid-lowering	19.3%	27.2%	<0.05
Days without meds/prior yr.	64 days	90 days	<0.05

Lin E et al. Diabetes Care 27:2154-60, 2004.

## Barriers to Adherence

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## Physicians

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Prescribe without basic communications:

- Name
- Purpose
- Duration of use
- Adverse effects /side effects
- # of tablets, and frequency

## Patient

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- Cognitive Impairment
- Missed appointments
- Psychological problems- depression/anxiety
- Lack knowledge of the disease
- Lack knowledge of treatment benefits/risks
- Fears or negative beliefs about treatment
- Side effects

## Clinician - patient Communications

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- Fears and beliefs about med
- Overly complex regimen
  - size- ½ pills, large pills,
  - timing- before meals, 2 hrs after meals,
  - frequency
  - multiple medicines
- Poor access to pharmacy or meds
- High Cost

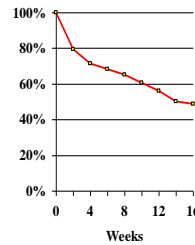
## Clinician - patient Communications

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- Poor clinician-patient relationship
- Side effects- management
- Inadequate follow-up

## ANTIDEPRESSANT ADHERENCE

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### ***Improve Adherence:***

- Take medication daily
- 2-4 weeks for full effect
- Side effects can occur, but often resolve in 1-2 weeks
- Keep taking medication even if better
- Check with Team before stopping
- Not addicting

Simon G et al. Gen Hosp Psychiatry 15:399-408, 1993.

## Assess Adherence

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- Simplest and non-judgmentally ask how often they miss doses-
- “I know it must be difficult to take all your medications regularly. How often do you miss taking them?”
- Side effects-
- Why they are taking their meds,
- Benefits,
- Fears/concerns /Purpose

## Interventions

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### Enhance Team and patient communications

- Educate- pt and family members
- Elicit fears and concerns
- Shared –decision making

### Behavioral technique and support services

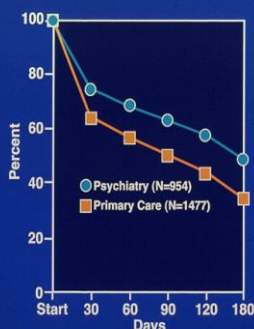
- Pill- boxes, blister packs
- Simplify dosing schedule (once daily if possible)
  - Daily dosing \* reducing frequency of dosing, more important than reducing # pills.
- Cues to remind pt- eg. Brush teeth, turn off lights
- Systematic f-u, refill reminders

Select- - more forgiving medications- longer half- life

## Treatment of Depression

### SSRIs: Optimize Dosage

- Fluoxetine 20 - 40 (80) 5 - 20 (40)
- Sertraline 50 - 150 (200) 25 - 50 (100)
- Paroxetine 20 - 40 (60) 10 - 20 (30)
- Citalopram 20 - 40 (60) 10 - 20 (30)
- Fluvoxamine 100 - 300 mg (200) 50-100 (75)
- Escitalopram 10 - 30 mg 5 - 10
- Start at therapeutic dose, except anxiety and aging patients (begin half, double in one week)
- GI (anorexia, nausea, diarrhea); restlessness; insomnia, somnolence, sexual dysfunction



Simon G et al. *Gen Hosp Psychiatry* 15:399-408, 1993.

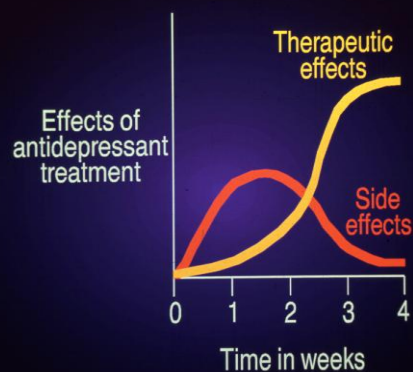
### General Office Strategies for Optimizing Adherence

- Provide rationale for use
- Vigorous attention to side-effects (see below)
- Counter demoralization, fear of dependence and loss of control
- Enlist family/spousal support
- Elicit resistance and relation to prior experience with medication
- Identify relevant illness aspects (phobic, paranoid)
- Increase contact with brief phone check-ins
- Specific instructions (take regardless of symptom change, don't stop on own)
- Use symptom scale PHQ-9

### MacArthur Initiative Tool Kit

- PHQ-9: Depression monitoring tool  
0 - 27 range  
≥10 major depression

<http://www.depression-primary care.org/toolkit2.html>



## Short-Term Side Effects

- Jitteriness
- Insomnia
- Headache
- Nausea

## Orgasmic Dysfunction

- 25 to 33% of SSRI-treated patients

## Sexual Dysfunction

- Wellbutrin 75mg PO BID
- BuSpar 15mg PO BID to 30mg PO BID

## Depression and Sexual Dysfunction

- Many patients with diabetes have problematic sexual functioning due to adverse effects of diabetes on the autonomic nervous system as well as the association of diabetes with peripheral vascular disease
- Since SSRIs and SNRIs are likely to worsen problems with sexuality, initiating treatment with Bupropion is the most reasonable choice in many of these patients

## Sleep Problems

- Sleep problems continue to occur in approximately 25% to 33% of patients despite effective SSRI treatment. It is recommended to treat this with Trazadone 25 mg, increasing by 25 mg increments every 5 days until insomnia is successfully treated.

## Diarrhea

- Diarrhea is particularly common with Sertraline (Zoloft), but could occur with other SSRIs or Bupropion (Wellbutrin). Changing to low dosage Paroxetine (Paxil) at 5 mg to 10 mg and titrating upward by 5 mg to 10 mg every 7 to 10 days to a dosage of 20 mg to 50 mg may help because Paroxetine (Paxil) has slight anticholinergic effects.



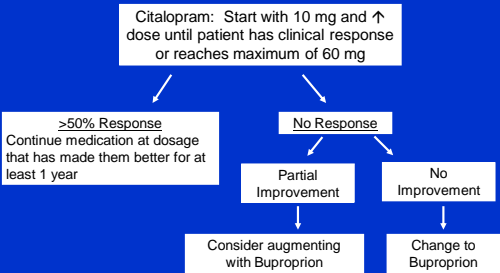
Weight Gain

- 5 to 10% of SSRI treated patients
- Rx – Wellbutrin, Fluoxetine

Clinical Response and Remission

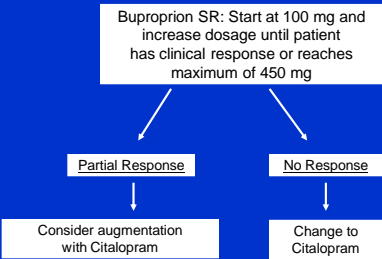
- Response:  $\geq 50\%$  decrease in PHQ-9 score
- Permission: PHQ-9  $< 5$

Step 1) Start with Citalopram or Bupropion and Behavioral Activation



Rush AJ et al. *Control Clin Trial* 25:119-142, 2004.

Step 1) Start with Citalopram or Bupropion and Behavioral Activation



Rush AJ et al. *Control Clin Trial* 25:119-142, 2004.

Step 2

If no response to Citalopram or Bupropion, change to Effexor XR 37.5 mg PO q AM or 37.5 mg BID. Increase dosage until clinical response or reaches a maximum dose of 300 mg

Rush AJ et al. *Control Clin Trial* 25:119-142, 2004.

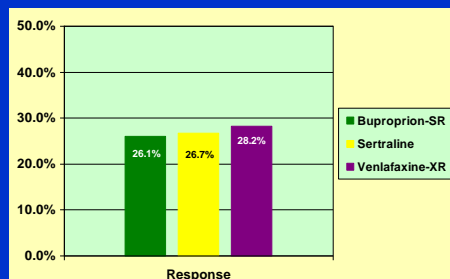
Patient with a Negative Initial SSRI Antidepressant Trial

- Star\*D suggest that if patient has one negative SSRI trial, switching to either a second SSRI, Effexor XR or Bupropion SR are each reasonable choices
- Also STAR-D suggests that if a patient had a negative SSRI trial augmentation with either Bupropion SR or Buspar are reasonable choices

Rush AJ et al. *Control Clin Trial* 25:119-142, 2004.

## Bupropion-SR, Sertraline or Venlafaxine-XR after Failure of SSRIs for Depression

Rush et al. *NEJM* 2006

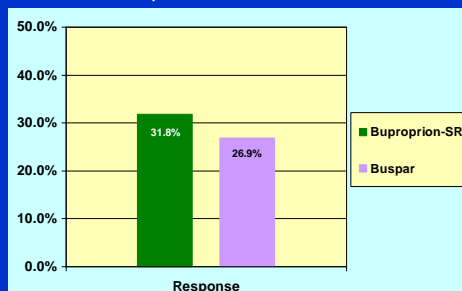


About one in four patients had a remission/response after switching to a new antidepressant with no differential effect

Rush AJ et al. *NEJM* 354:1231-1242, 2006.

## Medication Augmentation after the Failure of SSRIs for Depression

Trivedi et al. *NEJM* 2006



No differences in remission rates, but bupropion was associated with greater reduction in depressive symptoms and lower dropout from side-effects than buspirone

## Depression and Moderate to Severe Neuropathy

- Two SNRIs (Effexor XR and Duloxetine) as well as Bupropion have been found to be more effective than placebo in patients with diabetic neuropathy
- Given GHC formulary, treat patients with depression and chronic pain with either Effexor XR or Bupropion

## Treatment Resistance: Review Diagnoses

- Bipolar I and II
- Psychotic depression - add antipsychotic (Lithium, ECT)
- Alcohol, substance abuse (LFTs, Hep B and C, Macrocytic anemia, CAGE)
- PTSD
- Panic disorder

## Developmental, Relationship History

- Chronic social stressor
- History of childhood abuse/neglect
- Domestic violence
- Axis II disorder

» Inference: add psychotherapy

## Chronic Depression Study

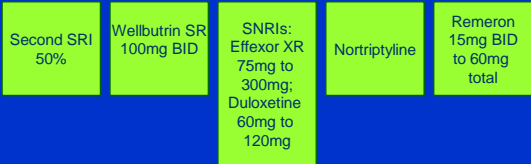
Keller et al., *NEJM* 2000

- Nefazodone and CBT vs. Nefazodone vs. CBT
- Response rate (>50% decrease in symptoms) were 85% in Nefazodone and CBT, 55% Nefazodone and 52% with CBT

### Hormones

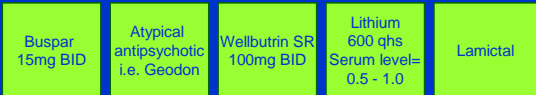
- Women > 50 - TSH
- Postmenopausal and low FSH – Estrogen?
- Diabetes and other chronic medical illness – low testosterone
- PMS

### Switch from SRI



### Augment

#### SRI



### Factors in Selecting an Antidepressant Medication

- age
- patient's prior response
- family member response
- medical illness comorbidity
- hx of medication sensitivity?
- concerns about weight gain?
- cost
- patient preferences
- suicidality

### Venlafaxine (Effexor)

- 75-225 (375) / 50-150
- 37.5 BID may be intolerable for some; rapid dose increase speeds effects
- Nausea, dizzy, sweating, somnolence, tremor, hypertension
- Superior for treatment resistant and to fluoxetine in one study of hospitalized depressives

### Bupropion (Wellbutrin)

- 300 - 450 (450)
- Wellbutrin SR 100 BID; 1 week later 2 @ 9 am, 1 @ pm
- Seizures (0.3 - 0.4%), nausea, anorexia, tremor, hypertension
- No sexual dysfunction; less mania induction in bipolars; effective in ADHD; ineffective in panic/anxiety; effective in TCA – non-responsive

## Mirtazapine (Remeron)

- Blocks  $\alpha_2$  presynaptic receptor enhancing release of serotonin
- Blocks 5-HT<sub>2</sub> and 5-HT<sub>3</sub> receptors reducing sexual dysfunction, anxiety and nausea
- Noradrenergic reuptake inhibitor
- Weight gain, sedation, dizziness
- 15 mg PO BID → 45mg

## Duloxetine (Cymbalta)

- 60-120 mg
- 30mg starting dosage, second week 60mg
- Nausea ~ 20%
- SNRI – increased serotonin & noradrenaline

## Currently Available Tricyclics/Heterocyclics

- Tertiary
  - Amitriptyline (Elavil®)
  - Imipramine (Tofranil®)
  - Doxepin (Sinequan®)
- Secondary
  - Desipramine (Norpramin®)
  - Nortriptyline (Pamelor®, Aventyl®)
- Heterocyclic
  - Amoxapine (Asedin®)
  - Maprotiline (Ludiomil®)
  - Trazodone (Desyrel®)

## Tricyclics

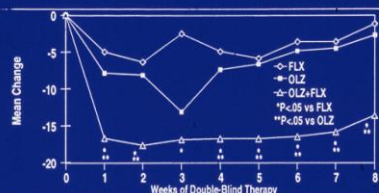
- DMI 100-200 (300)/25-100 (150)
- NT 75-100 (150)/30-50 (75)
- Start low (10-25) and go slow (Q3 days/Q5 days)
- Sedation, weight gain, constipation, memory impairment, tremor, sweating, hypotension, cardiac conduction delay, sexual dysfunction
- No longer first line agents; better for severe, hospitalized depression?

## Olanzapine and Fluoxetine in Treatment-Resistant Major Depression

- N = 28
- Patient diagnosis: MDD without psychotic features
- Treatment resistance
  - 1 NSRI and 1 SSRI x 4 weeks at adequate dose
  - Fluoxetine run-in (6 weeks) at 40-60 mg/day (≤ 30% improvement - HAM-D-21)
- 8-week double-blind treatment: 3 treatment groups
  - Fluoxetine 20-40 mg/day + placebo
  - Olanzapine 5-20 mg/day + placebo
  - Olanzapine + fluoxetine
  - 8-week olanzapine + fluoxetine open-label

Shelton RC et al. *Am J Psychiatry*, 2001;158(1):131-134

## MADRS Score: Mean Change from Baseline



• Within the first week of therapy, olanzapine plus fluoxetine treatment produced a reduction in depressive symptoms as measured by the MADRS

• Olanzapine plus fluoxetine was statistically significantly superior to fluoxetine at every visit and statistically significantly superior to olanzapine at all visits except at week 3

Shelton R, et al. *Am J Psychiatry*, 2001;158(1):131-134.  
Mean model dose: FLX 52.0±14.9 mg/day, OLZ 12.5±5.3 mg/day, OLZ+FLX 13.5(10.3)+52.0(4.1) mg/day.  
Mean model dose: OLZ+FLX 10.7±47.3 mg/day.

## **Diabetes-Focused Depression Care**

*In addition to standard evaluation of current (and past) episodes of depression:*

1. Assume depressed patient is experiencing “loss of control” of disease self-management or outcomes resulting in frustration, bewilderment, resignation, etc.
2. Assess for understanding of bidirectional link between stress and suboptimal disease self-management and outcomes.
3. Define depression and how it overlaps with (and is distinct from) “stress”.
4. Review symptoms of depression and how these symptoms overlap with or mimic diabetes symptoms. Discuss depression-related symptom amplification.
5. Consider “biological” sequelae resulting from comorbid depression:
  - e.g. increased glucose levels (increased glucometer mean+SD, higher Hb<sub>A1c</sub>)
  - e.g. increased neuropathy pain, i.e. increased intensity, functional impairment
6. Consider “behavioral” sequelae resulting from comorbid depression:
  - e.g. decreased self-care (refilling prescriptions for medications and monitoring strips; glucose monitoring; exercise; diet). Look for helplessness/“giving up” or sense of being overwhelmed around disease self-care
  - e.g. missed appointments or high health care utilization (labs, visits, urgent care)
  - e.g. decreased satisfaction with care
  - e.g. decreased ability to rely on others
7. Screen for comorbid anxiety ± panic attacks and look for inability to differentiate anxiety symptoms from diabetes symptoms (e.g. hypoglycemia).
8. Screen for associated eating concerns (e.g. emotional eating in response to sadness/loneliness/anger, etc.; binge eating ± purging; night eating).
9. Break down tasks (self-management of diabetes, depression, heart disease, other illnesses) and help patient prioritize in order of importance
10. For patients with comorbid anxiety, consider using SSRI or SNRI
11. For patients with sexual dysfunction, consider using bupropion or mirtazapine (consider weight gain with mirtazapine)
12. For patients with significant neuropathy, consider bupropion, venlafaxine or duloxetine
13. Consider adjunctive brief psychotherapy for:
  - emotional eating (CBT)
  - breaking down problems (problem solving therapy)
  - improving treatment adherence (motivational interviewing)
  - improving effective patient-provider interactions (patient coaching)

*Outreach* – While some participants may be easy to reach and enthusiastic about participation, significant outreach efforts will be required in many (if not most) cases. Care managers should expect that repeated phone calls may be required for the initial contact and (in some cases) for each follow-up contact. While this may be frustrating, care managers should recall that those requiring the most energetic outreach are probably also those most likely to benefit from the intervention. As described below under “Premature Termination”, failure to respond to outreach efforts will never be considered a reason for termination from the intervention program. In some cases, however, care managers may choose to decrease frequency of contact attempts or defer further contact attempts for some period. Participants who do not respond to initial contact attempts may be more receptive weeks or months later. While the amount and type of outreach may vary widely among participants, a typical initial outreach protocol might include:

- Case assigned to care manager, contact attempts begin immediately
- At least 5 attempts at telephone contact at varying times (morning, afternoon, evening) during the next 5 days
- Outreach letter explaining program and asking participant to call in
- Continued attempts at telephone contact at least twice a week for 4 weeks
- Second outreach letter
- Continued attempts at telephone contact at least twice per month for remainder of intervention period

### Premature Termination

The only reasons for termination from the intervention program will be death, development of an illness precluding informed participation (e.g. severe cognitive impairment), or a participant’s clear refusal of further contact. As discussed above, failure to respond to outreach calls, change of diagnosis, or discovery of covert substance use disorder will not result in termination from the intervention program.

## Patient centered counseling for physical inactivity

Patients with most to gain from an increase in physical activity are those who are currently 'inactive', but 'moderately active' patients should also receive advice to aim for **30 minutes of moderate activity on 5 days of the week (or more)**.

Patients who are already active should receive verbal reinforcement that reflects their current level of physical activity and should be encouraged to either make small increases to their physical activity or continue with their current level.

The focus of any further intervention should be on those who are 'inactive'. This *might* take the form of a brief, verbal intervention.

One way to be consistent with a patient-centered approach is to base behavior-change negotiations on the principles of motivational interviewing (MI). Although developed in the field of addictions, brief versions of MI have been adapted and applied to a wide variety of behaviors and conditions such as smoking, diet, physical activity, medical adherence and diabetes, with evidence of effectiveness (Resnicow et al., 2002; Rollnick, 1999, Rubak, 2005).

Below, an example is offered of a brief verbal intervention for inactive patients based on the principles of MI.

### Example Dialogue for Inactive Patients

Ask your patient,

"On a scale from 0 to 10, where 0 is not motivated at all, and 10 is extremely motivated, how motivated would you say you are right now to increase your physical activity?" (Make a mental note of the value).

"If you were to decide to increase your physical activity, how confident are you that you would succeed? If, on a scale of 0 to 10, 0 means that you are not at all confident and 10 means that you are 100% confident you could become more active. What number would you give yourself now?" (Make a mental note of the value).

Then ask your patient a second scaling question,

"For motivation to change why are you at a \_\_\_\_\_ (the number the patient gave) and not 0?"

The answer to this question is the patient's **motives and reasons for change**.

Next ask,

“And for confidence to change why are you at a ——— (the number the patient gave) and not 0?”

The answer to this question is the patient’s “**self-efficacy**,” the positive reasons why change seems possible.

Finally, provide the patient with a brief summary of what you heard and then ask,

“What do you think the next step is for you?”

A common response is for the patient to say they don’t know or are uncertain. If they do, follow with,

“Let’s list what the options are at the moment. You could:

1. Stay as you are and do nothing;
2. Start to increase the amount of physical activity that you do;
3. Use a pedometer for x weeks so that we could take a closer look at your physical activity;
4. Consider joining a community exercise program, group or club from this list.

What do you make of these?”

In just a few minutes it is possible to encourage the patient to consider why and how they might change their physical activity without feeling as if they are being pushed or coerced into something they are not ready for.

(Dialogue based on Rollnick et al, 1997; Miller, 2005; Rollnick et al, 2005)



### **'Inactive' Patients who self-report 3 hours or more per week of walking**

Patients who claim to undertake significant amounts of walking may require a modified brief intervention that probes their understanding of walking and walking pace and the basis upon which they have declared the amount of walking accumulated during the last week. For those patients who remain confident that they achieve the recommended levels of physical activity by virtue of their walking intensity and duration, encourage them to continue. The example dialogue given for inactive patients could be prefaced with the following:

"You say you do three hours or more of walking per week. So that I might better understand how walking fits into your day, perhaps you could talk me through a typical day for you, starting from when you get up in the morning right through to when you go to bed telling me where walking fits in. How about yesterday, could you talk me through yesterday?"

If the patient insists the previous day was atypical, use the day before that. Try to avoid going too far back as the accuracy of recall will be diminished. The practitioner's task in this exercise is simply to listen, without offering any judgment of what is being said. The aim is to get the patient talking about their current behavior in a non-threatening (the threat of being told to change) environment that will build rapport and conveys to the patient that the practitioner listens and is genuinely interested in their situation.

Once the patient has completed the description of their day the practitioner should simply summarize the information on walking and then proceed to the motivation and confidence questions described above, as appropriate.

*Adapted from the UK NHS guide for physicians.*

## Physical Activity Plan

If you're not doing any regular exercise of physical activity now, it's best to start with a goal of about 250 calories per week. You're more likely to be successful if you start small and build steadily. Starting too fast will more likely lead to setbacks and discouragement. It's also best to spread your activity over the week – like 50 calories per day on five different days.

Light activity (like walking) burns about 5 calories per minute. If you want to burn 50 calories per day, you'd need to walk (or do some other activity with a similar calorie-burning rate) for 10 minutes each day.

What type of physical activity will you start with? You might choose one (like walking) or you might want a bit more variety. Write your choice or choices here:

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Now try to make a specific plan for exercising five days during the next week. Be as specific as you can (What? When? Where? With whom?)

Day	What & How Long	When, Where, With Whom
Tomorrow		
Day 2		
Day 3		
Day 4		
Day 5		
Day 6		
Day 7		

## Problem Solving Treatment Approaches to Behavioral Activation

## Problem Solving Treatment for Primary Care (PST-PC)

A brief and practical skill-building treatment for depression designed for use in primary medical care setting

## Problem Solving Treatment for Primary Care (PST-PC)

- Effective for the treatment of depression and other types of emotional distress
- Effective for persons of all ages and with a variety of medical illnesses
- With training, PST-PC can be provided by mental health specialists and general medical staff (nurses and physicians)
- Brief, practical and time-limited

## Problem solving applications for care management

- Problem solving skills are not just for depression.
- Problem solving skills can generalize to all areas of health care and care management.
- Most chronic medical problems require significant lifestyle adjustments,
  - e.g., changes in activity levels, medication regimens, diet, dependency vs. independence.
- Problem solving steps can be applied independently depending on patient needs.

## Goals of PST-PC

- Increase patient's understanding of the link between their current symptoms and their current problems in living
- Increase patient's ability to clearly define their problems and set concrete and realistic goals
- Teach patient a specific, structured problem-solving procedure

## Goals of PST-PC

- Produce positive experiences of patient's own ability to solve problems, thereby increasing their confidence and feelings of self-control

## Explain link between problems, depression and problem-solving

- Unresolved problems can cause and worsen depression
- Worsening mood interferes with problem solving
- Downward spiral between problems and mood
- PST-PC strengthens problem solving skills
- Improved problem solving lifts mood
- Improvement follows action

## Establishing a positive problem orientation

- Problems are a normal and predictable part of living.
- Negative mood is a cue that a problem is present.
- Some degree of control can often be achieved.
- Effective solutions exist at least in part, if not in total.
- Taking action alone will cause mood to improve.

## The seven steps of PST-PC

1. Clarifying, defining and breaking down the problem
2. Establishing a realistic, achievable goal
3. Brainstorming multiple solution alternatives
4. Implementing decision-making guidelines (i.e., evaluating the pros and cons)
5. Evaluating and choosing the solution
6. Identifying specific steps for plan of action
7. Evaluating the outcome after solution has been implemented ("review and renew")

## Step 1: Clarifying and defining the problem

- Explore and clarify:  
Who, What, Where, When, Why?
- Break down complex, long-term problems
- State in objective terms:
  - Can I picture this?
  - Think "function"
- Must be feasible (i.e., the person has some degree of influence in the matter)

## Step 2: Establishing a realistic goal: think SMART

- Goal is:
  - Specific
  - Measurable / objective
  - Achievable
  - Relevant
  - Timed
- Stated in behavioral terms
- Follows directly from the problem definition: "What do you want to change about...How would things be different?"

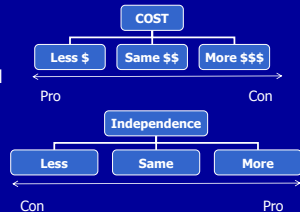
## Step 3: Generating multiple solution alternatives: Brainstorming

- Brainstorming facilitated
  - Throw caution to the wind!
  - Number is more important than quality
- Combine and modify ideas
- "What else?"
  - ...then be quiet!
- Solutions from client
- Withhold judgment

## Step 4: Implementing decision-making guidelines: pros and cons

Example: Housekeeper vs. do-it-yourself

- Cue for major themes:  
Time, effort, cost, independence, emotional impact
- Consider pros/cons for self and others
- Identify and compare themes as they emerge



## Step 5: Choosing the solution

- Deliberate, systematic evaluation of pros and cons
- Solution satisfies the goal
- Review the rationale for choice
- Negative impact is limited
- "Do-able"

## Step 6: Implementing the preferred solution: the action plan

- Specific tasks identified:
  - Where, When, How, Who...
- Anticipate obstacles
- Realistic behavior requirements
- Behavior rehearsal/role play to improve confidence
- Plan pleasant, social activities

## Step 7: Evaluating the Outcome

- Review all tasks
- Praise success!
- Explore failure:
  - Low motivation
  - Inappropriate goals
  - Wrong choice of solution
  - Unforeseen obstacles
- Reinforce the PST model and connection between feeling better and client's efforts
- Review all previous problem areas

## Sally's example

- Selecting the problem from the problem list: "Which problem area is affecting your life the most right now?" financial problems
- Specifically defining and breaking down the problem: "When are you most aware of the problem?" when I see the months of unpaid bills piled up
- Establishing a realistic goal: "What would you like to see happen?" not having my utilities cut off

## Sally's example

- Generating multiple solutions: "What kinds of things can you do to reach your goal? We'll address concern next!"
  - Borrow money from daughter Pat
  - Pay some bills with credit card
  - Sell car
  - Pay the most outstanding utility bills
  - Take in a roommate
  - Call the utilities to arrange extended payment plan

## Sally's example

- Implementing decision-making guidelines ("What are the advantages and disadvantages for you or for others?")

Borrow money from Pat

- Pros: could pay most of the bills right away, wouldn't have to pay interest
- Cons: already borrowed \$2,000 that hasn't been paid back, could hurt the relationship, I would feel guilty

## Sally's example

- Choosing the solution "Which ones have the best chance of success?" (i.e., have impact on problem, high likelihood of being able to carry out, fewer negative consequences for others)

Pay the most outstanding utility bills

Call the utilities to arrange extended payment plan

## Sally's example

- Developing plan to implement the solution; "Let's figure out what steps need to be taken..."

1. Make space on dining room table
2. Sort mail into bills and other mail
3. Sort bills into those that need to be paid right away and those that can be put off
4. Call utilities (during business hours) to negotiate payment plan

## Sally's example

- Evaluating the outcome: "How did it go? "How did accomplishing that affect your mood?"

"Felt like a weight lifted off my shoulders...."

## Common issues in PST

### Defining the problem: pain

- Clarifying problem areas; e.g., "What part of this do you have control over?"
- Define a problem as it relates to function rather than symptoms:  
e.g., "I am unable to do housework for more than 1 hour without feeling moderate pain in my back" versus  
"Housework is painful"

## Common issues in PST

### Choosing too large a goal

- Achievability is key
  - One mechanism of treatment action is the confidence enhancement that comes with success
- Break large problems into bite-sized chunks

### Common issues in PST Mixing up the problem and solution

- “The problem is that I need to lose weight” VERSUS
- The problem is that the client weighs too much and the long-term goal is to lose weight.

### Common issues in PST Mixing up the goal and solutions

- Watch for goals that are so specific as to narrow possible solutions

### Advantages of PST-PC

- Focuses on current real-life problems
- Collaborative between patient and treatment provider
- “Empowering”
- Non-stigmatizing and “face valid”

## **Brief Description of the Problem Solving Treatment (PST) Method**

*Taken from: Hegel, Barrett, Oxman. Training Therapists in Problem-Solving Treatment of Depressive Disorders in Primary Care: Lessons Learned from the "Treatment Effectiveness Project". Families, Systems & Health, 18(4), 423-435. (12/22/2000)*

### **PROBLEM SOLVING TREATMENT**

Research has shown that minor life events or problems are strongly associated with psychological symptoms, possibly even more so than major life events (Nezu, 1987). The degree of impact of these events upon psychological functioning is moderated by personal attributes related to coping ability. For example, the appraisal of problems as challenging rather than as threatening, and the perception of the self as possessing adequate coping resources (e.g., sense of control, self-efficacy), serve important functions in buffering against the negative effects of life stressors. Evidence has also linked weak problem-solving abilities to the etiology and maintenance of psychological disorders (D'Zurilla, 1990; 1986).

These findings have led to the development of Social Problem-Solving Therapy, a cognitive-behavioral therapy that treats depression by teaching patients how to systematically solve psychosocial problems (Nezu, Nezu & Perri, 1989; D'Zurilla, 1986;). The intervention has been found effective in treating depressive syndromes in both younger and older adults (Arean, Perri, Nezu, et al., 1993; Nezu, 1986) and persons with mental retardation (Nezu, Nezu & Arean, 1991). This original problem-solving therapy adheres to a traditional psychotherapy model, requiring therapists with a strong background in cognitive-behavioral therapy, and 10 to 12 therapy sessions. These specialized training and time requirements make its application in primary care settings less practical.

In contrast, a problem-solving model of treatment was developed by a team of researchers at Oxford University specifically for application in primary care (Catalan, Gath, Anastades et al., 1991). Most sessions can fit into a 30-minute or less clinic appointment and the total length of treatment may last only four to six visits. The treatment was designed so that non-mental health specialists in the primary care setting could deliver the treatment following adequate training. The Oxford researchers also emphasized a very practical training model so that patients could easily see the value of learning problem-solving skills and quickly apply these skills in their everyday life. In order to distinguish this version of problem-solving treatment from the traditional mental health model we refer to it as "Problem-Solving Treatment in Primary Care" or "PST-PC." Due to its brevity and flexibility, the treatment is more feasible for the primary care setting (See Table 1).



TABLE 1: Methodologic Distinctions Between Problem-Solving Treatment for Primary Care (PST-PC) and Traditional Problem-Solving Therapy for Specialty Mental Health Settings (PST)

<u>Method</u>	<u>PST-PC</u>	<u>Traditional PST</u>
Therapist	Broad range of providers (general medical, nursing, mental health, etc.)	Behavioral Therapists
Session Length	30-minutes or	One hour or more less
Treatment Duration	4-6 sessions	10 sessions or more
Total Treatment Time	2-3 1/2 Hours	10 hours or more
Treatment Model	Apply skills during first treatment session	Build skills in stages across sessions

## RATIONALE AND PROCEDURES FOR PST-PC

PST-PC is a collaborative treatment between the therapist and patient in which there are three main goals. First, the patients' symptoms are identified and linked with their problems in living. Second, the problems are defined and clarified. Third, an attempt is made to solve the problems in a structured way. Patients begin the process of reasserting control over their lives and thereby begin to resolve emotional symptoms (Seligman, 1975).

Because PST-PC is brief and focuses on helping the patient acquire new skills for living, dependency on the therapist is minimal by the patient. We consider PST-PC to be a psychoeducational and behavioral activation intervention rather than psychotherapy in a more traditional sense. After learning the technique of problem-solving, the patient should be able to apply the skills to problems that might arise in the future, and thus avoid or minimize the development of depressive symptoms.

In problem-solving treatment the relationship between the patient and the therapist is important. Early in treatment considerable encouragement and support are needed to motivate patients to use the methods of problem-solving. The treatment should therefore be delivered within an empathic and trusting relationship. Although highly collaborative in nature, the patient should be the one to decide which problems, goals,

and solutions to use. Except for solutions carrying the potential for highly negative outcomes for the patient and/or others, the patient is considered to be the best judge of their own situation. The therapist's role is to develop the patient's own skills in solving his/her problems, not to solve the problems for the patient.

## The Seven Stages of PST-PC

PST-PC training consists of seven consecutive stages that are applied to at least one problem area per treatment session. The seven stages are outlined in Table 2.

TABLE 2: The Seven Stages of Problem-Solving Treatment for Primary Care

### **Stage 1: Defining the Problem.**

- \* Specific, feasible problem
- \* Described in objective terms
- \* Problem explored and clarified
- \* Complex problem broken down

### **Stage 2: Establishing Realistic Goals for Problem Resolution.**

- \* Goal is objective
- \* Described in behavioral terms
- \* Goal is achievable

### **Stage 3: Generating Multiple Solution Alternatives.**

- \* Brainstorming is facilitated
- \* Solutions come from patient
- \* Withhold judgment

### **Stage 4: Implementing Decision-Making Guidelines.**

- \* Consider "pros" and "cons" for each solution
- \* Solutions are compared to each other

- \* Psychosocial resources are addressed

### **Stage 5: Evaluating and Choosing the Solution(s).**

- \* Deliberate, systematic process
- \* Solutions satisfy the goals
- \* Negative impact is limited

### **Stage 6: Implementing the Preferred Solution(s).**

- \* Specific tasks are identified
- \* Tasks are relevant to solution
- \* Tasks are within the patient's repertoire

### **Stage 7: Evaluating the Outcome.**

- \* Review all homework assignments
- \* Exploration of failure
- \* Renew problem-solving if necessary

### **Stage 1: Defining the Problem**

This stage involves two main steps. The first step is to state the problem in an objective and feasible format. The patient chooses one particular problem which both the patient and therapist consider feasible for problem-solving. Assessment of feasibility is primarily based upon the degree of control the patient can potentially exert over the problem. For example, problems defined as having "diabetes" or "low self-esteem" are not well stated because the patient cannot make the diabetes go away, nor can they directly change a subjective experience such as "low self-esteem." However, a problem defined as having "difficulty adhering to a diet" necessary for diabetes management is better stated in that the patient can potentially modify his/her diet behavior. Likewise, a problem defined as having "trouble making friends," which is an objective behavioral referent of low self-esteem, is better stated and leads to specific actions that may be taken.

The second step, when necessary, is to break down complex problems into several smaller, more manageable parts. For example, one of our patients stated that she and her husband were not getting along. Upon further examination it became apparent that this problem was comprised of several components. First, her husband traveled a great deal for business, and thus they did not have much time together. Second, they disagreed on the issue of how much freedom to allow their teenage daughter. Third, the

patient was upset with her mother-in-law for relying upon the husband too much for support and consolation. In this case, the therapist and patient reviewed the more specific list of component problems and addressed each separately.

## Stage 2: Establishing Realistic Goals for Problem Resolution

Goals should be identified that can be achieved quickly, ideally before the next treatment visit. Medium- and long-term goals can be set early in treatment but will need to be attained in stages over the course of treatment. Emphasis is placed on stating an objective behavioral goal. Thus, for the above patient, a goal of "improving understanding of the daughter's limits" would not necessarily have led to a specific solution because the behaviors required to meet the goal were not identified. However, the goal of "all family members will be able to state the curfew hours for Maggie on weekdays and weekends" lent itself much more readily to generating a plan of action.

## Stage 3: Generating Multiple Solution Alternatives

In this stage the patient is assisted in generating as many solutions as possible via "brainstorming" techniques. The rationale for this is that the availability of a number of alternative actions will increase the chances of identifying one or more particularly effective solutions. Potential solutions should not be discarded or prejudged, thus helping the patient to become more flexible in his/her perspective on problems. Patients should understand that combining or modifying ideas as the brainstorming process continues is acceptable. Thinking about how other persons might solve the problem, or generating even blatantly silly ideas, is often helpful to facilitate the process and promote creativity.

## Stage 4: Implementing Decision-Making Guidelines

The therapist asks the patient to consider the potential consequences by drawing up a list of the pros and cons for each solution. The therapist asks the patient to think of the "advantages and disadvantages," the "obstacles," and any other benefits or challenges connected with each potential solution, both for itself and in comparison to other solutions. Effective solutions are those that not only solve the problem but also minimize negative outcomes for the self and others.

## Stage 5: Evaluating and Choosing the Solution(s)

Once the pros and cons have been laid out for each potential solution, the patient selects a preferred solution or solutions. Patients initially may find this stage very difficult to complete, often ruminating about all of the possible solutions without being able to choose one, or stubbornly clinging to only one solution which carries little potential for success. In fact, this probably replicates their own failed attempts at problem-solving in their lives; they focus on negativistic expectations or fear making a mistake and therefore avoid action. A brief review of the pros and cons of suggested solutions with the therapist, along with encouragement to "take a chance," is often

helpful in getting the patient over this initial hurdle and on to effective action. The patient is then encouraged to select a preferred solution based on this "cost-benefit" analysis.

#### Stage 6: Implementing the Preferred Solution(s)

The specific behaviors required to achieve the solution are identified and planned. These actions are usually broken down into very basic units, and the patient has a clear set of homework tasks to be completed between treatment sessions. For example, in setting the curfew for her daughter, the patient above needed to: a) examine the family's schedule to find a mutually convenient meeting time; b) inform family members of the meeting well enough in advance to allow schedules to be freed; c) hold the meeting; and d) determine a set of guidelines to lead the discussion. It is helpful to specify details such as when certain actions are to take place, where they are to occur, which persons are involved, and so on, in order to maximize the likelihood of success.

#### Stage 7: Evaluating the Outcome

At the start of each subsequent session the patient's progress is assessed. If difficulties have arisen, the possible reasons for failure are then examined, such as: Were the goals defined clearly? Were the goals unrealistic? Have new obstacles arisen? Were the solutions or homework assignments unrealistic? Was the patient truly committed to the chosen problem and its solutions? These questions then direct the current treatment session to either continue focusing on the same problem area or choosing a new problem. Patients are encouraged to conduct their own evaluation of the outcomes between sessions and engage in new independent problem-solving efforts as necessary.

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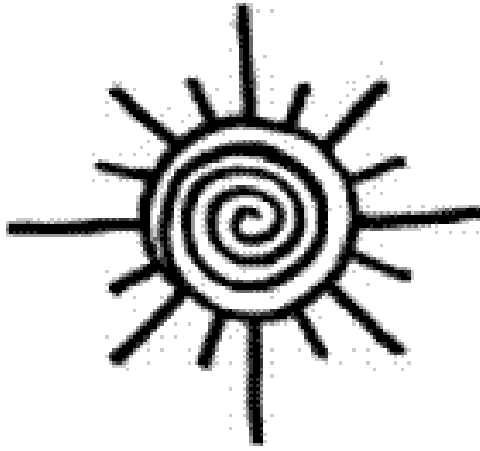
TEAM care (team treatment enhancement, activation, and motivation) study  
Session one outline

1. Welcome patient and thank them for participating
2. Introduce the program goals and logistics (length of program, frequency and types of contacts) and the role of Nurse Care Manager (NCM)
  - Present holistic model of patient centered care ('you're not just a collection of illnesses and symptoms; this program is about a collaborative (team) approach to helping you feel better and more in charge of your health...')
  - Define role of NCM as care coordinator and coach, instill hope and confidence ("I'm going to stick by you ....")
  - High light patient's central role in treatment received - " the chief-executive/ boss' for managing the x,y,z.
  - Explain goal of collaboratively developing an Integrated Care Plan [My Better Health Plan] that evolves over time- ("...so we are all on the same page about plans to improve your health, and are helping you reach the goals that are important to you").
3. Conduct a brief psychosocial assessment- "We will be getting to know each other more over time, but for now, what are the important things I should know about you?" Probe for information regarding family, living situation, jobs and hobbies, stresses and supports, as well as patient's perceptions of current health conditions (e.g., do they even identify depression on their list?) Use assessment form modified from Pathways intervention study to structure assessment and document history and medical issues.
4. Use elicit-provide–elicit framework:
  - Elicit- "What / how much do you know about your current health conditions? How are those conditions (e.g., depression and diabetes) related to each other?" "What have you tried successfully and not so successfully to manage your conditions?"
  - Provide- Feedback and brief information about test results –PHQ, HbA1c, BP, etc. Describe what results mean, what normal values are, etc.
  - Elicit- Assess the person's interpretation of the information. What do you make of this information? What most concerns you?
5. Provide information and advice re: short and long term strategies. (Example: "I believe there are several an important things you can do for your health. One important thing is to get more physical activity. This is important because it can help control x, y and z.....and may also benefit your mood." Present highlights, but don't overwhelm with information about treatments and benefits. Present initial tailored educational material.

- Prioritize these strategies using study guidelines and algorithm, and mention top three possibilities to start.(patient may only be able to commit to one) At least one should address depressive symptoms. Acknowledge that change won't happen over night ("I know that these changes can sometimes be very difficult to make....")
6. Assess motivation (WHY change) and ask key questions to *enhance* motivation, "What do you most want to work on?"
    - "Why would you want to make this change (e.g., start exercising, glucose self-monitoring, taking antidepressant medication, etc)?"
    - "What are the three best reasons to do it?"
    - "On a scale from 0 to 10, how important would you say it is for you to make this change? And why are you at \_\_\_\_\_ and not zero?"
  7. Address obstacles to change (or even knowing HOW to change), and promote self-efficacy by asking "How might you go about it, in order to succeed?" "What might get in your way?"
  8. Collaboratively set written short-term plan re:
    - 1) Medications,
    - 2) Self-monitoring,
    - 3) Behavioral activation (pleasant and accomplishment activities),
    - 4) Physical activity,
    - 5) Patient activation – eg, list of items to discuss with PCMD

Follow-up immediately with PCMD regarding new or changes in prescriptions

Follow up within three days with phone call to patient



# **Tools for Managing Your Chronic Diseases**



## Finding information in this booklet:

Topic	Page
the TEAMcare Study	3
the Depression Diagnosis doesn't fit	5
What is Depression?	6
Depression's Downward Spiral	7
Interrupting Depression's Downward Spiral	8
When you don't feel like <u>Doing Anything</u>	9
Getting More Active	10
Are you willing to take an Antidepressant?	11
Questions about Antidepressant Medications	12
The Best Action from Antidepressants	14
Getting a Good Night's Sleep	15
Relaxing	16
Thinking More Constructively	17
Ruminating	18
ACTION Strategy	19
Managing Your Medications	20
Managing Persistent Pain	21
Monitoring your Health	22
Monitoring Your Depression: The PHQ 9	23
Making Choices about Your Health	24
Making Choices for Better Heart Health	25
Monitoring Your Blood Pressure	26
Better Health with Diabetes	27
Using Blood Sugar Readings	28
When Your Blood Sugar is too Low	30
Sick days and diabetes	31
Communicating with Your Doctor	32
Using all the Tools: My Group Health	33
Your Relapse Prevention Plan	34
Staying on Track with other Changes	36

**Thanks:** We are very thankful that you decided to work with us in this research study. You may improve your own health and may help us to improve the care of other people, too.

### **What's this study and how might it help you?**

This study is the Treatment Enhancement Activation and Motivation ("TEAMcare") Study. Our goal is to help you feel better and take better care of yourself. We know it's a challenge to manage chronic diseases and life—we're here to stand by you and help you.

### **How does the TEAMcare Study work?**

- ✓ The services you receive from the TEAMcare study are in addition to the regular care you get from your Primary Care Team. That means you will still use your Primary Care Team when you need regular health check-ups, have emergencies, or have questions not related to the study.
- ✓ Your TEAMcare Study Nurse is in regular contact with your Primary Care Physician and Registered Nurse.
- ✓ Your TEAMcare Study Nurse has weekly supervision sessions with a TEAM of specialty experts, including Internal Medicine Physicians, Psychiatrists, and Psychologists who will help make your treatment choices up-to-date and good for you.
- ✓ You're in charge of your care. We have information, techniques and medications that have helped other people like you. You're the "captain of the team" who decides where you want to start and where you want to go.
- ✓ There will be **no charge** for the visits with your TEAMcare Study Nurse.

**How long will the study last?** One year of visits with the TEAMcare RN. The TEAMcare study lab tests and interviews will last for 2 years.

### **What should I expect to happen during the Study?**

- ✓ When we first start working together, we'll want to see you in person. We'll also want to see you in person if you're starting to monitor blood pressure or are starting a new medication such as insulin.
- ✓ We will also have discussions by phone.
- ✓ If you're registered on "MyGroupHealth", we can follow-up with your care or questions by the secure email system.

### **What Should I expect from My TEAMcare Study Nurse?**

You should expect us to:

- ✓ Give you the best information we can about your self-management options and their predicted effects.
- ✓ Understand that you're not perfect (and neither are we). We're here to help you manage your health in ways that fit into your life.
- ✓ Understand that the problems you face may seem like mountains. We can help you break down these mountains into smaller hills and then can help you with the steps along the way.
- ✓ Help you figure out which medications may be useful for your health problems and help you manage taking the ones that you choose.
- ✓ Understand that you are in charge of your health. We're here to help you, but you're the captain of your healthcare ship.

### **A Better Health Plan.**

We'll work together to create a Better Health Care Plan. This is a plan that we'll work on together to make sure we're on the same page about plans to improve your health and help you reach goals that are important to you.

**I'm not sure the Depression Diagnosis fits. . .  
I'm just tired. . .**

**Some people with depression** are troubled by negative thoughts and feelings of sadness or hopelessness. Others are most aware of physical symptoms such as low energy, poor sleep, poor appetite or overeating, and feeling agitated or 'slowed down'.

**The diagnosis of depression** is made by reviewing your mood, your physical symptoms and your score on the PHQ 9 test. This test is a good predictor of depression. The test results are scored by:

- ✓ Scores greater than 10 = major depression
- ✓ Scores of 5-9 = mild depression
- ✓ Scores of 0-4 = no depression or good response to your treatment.

**You can use the PHQ 9 Depression Questionnaire (page 23) tool to check up to see how you're doing**—as often the first improvements are hard to see.

**What causes depression?** Life stresses and medical problems can cause changes in certain brain chemicals. Imbalances in brain chemicals can result in some of the common symptoms of depression such as sleep and appetite problems, loss of energy, loss of concentration, and chronic pain.

**The good news is:** that there are a number of treatments that help depression and the symptoms it can cause. **We're here to find a treatment that works for you.**

## What is Depression?

### Basic facts about depression:

- ✓ Depression is a medical condition--not a sign of personal weakness.
- ✓ About 30% of people with chronic disease will experience clinical depression at some time in their life.
- ✓ The best research indicates that depression is caused by a combination of inherited or genetic factors and life stresses—just like high blood pressure or heart disease.

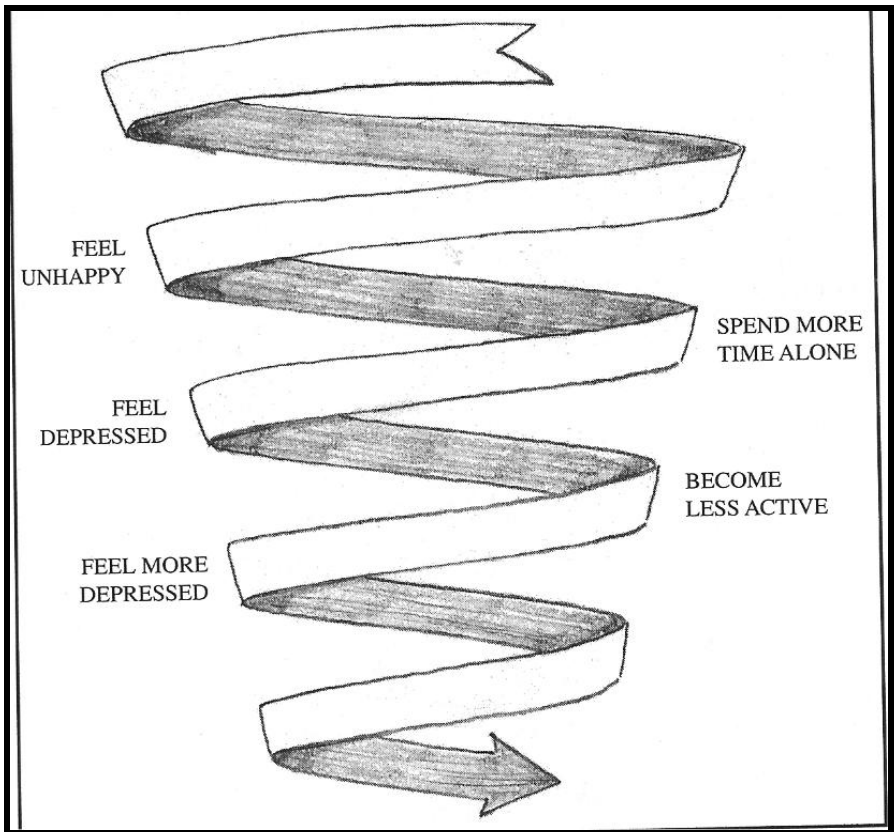
**Common symptoms of depression:** An individual's symptoms of depression can vary, but often feelings include sorrow, dejection, despair or irritability. Most people feel sad or blue occasionally, but when these feelings persist, worsen or interfere with work or personal relationships, depression is suspected. In addition to these feelings, people will often describe physical symptoms, such as backache, headache, or stomach trouble.

People with depression may feel like staying at home more and avoiding other people, they may lose interest in life and have a more difficult time enjoying usual activities. Living with a chronic disease is always more complex when you are depressed. Depression can make health care routines seem totally overwhelming.

The good news about depression is that it can be helped:

- ✓ Taking antidepressants makes most people feel much better in 2-4 weeks.
- ✓ Psychotherapy helps people improve their relationships and participate in more pleasant activities.
- ✓ Psychotherapy can help most people feel better in 6-8 weeks.

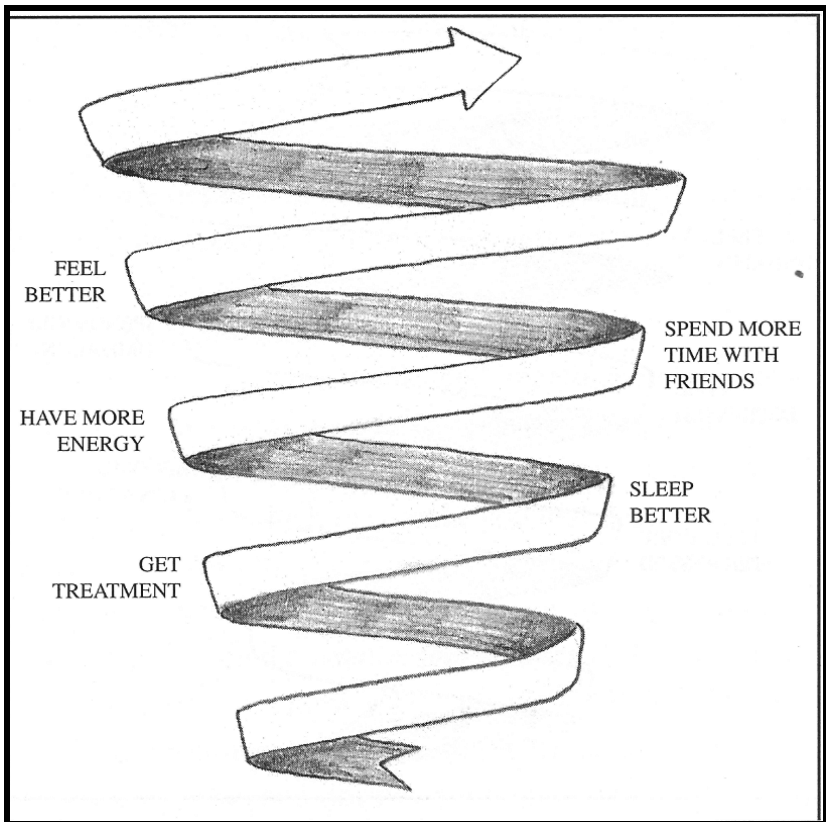
## Depression's Downward Spiral



Depression influences your physical well-being, your thoughts and your feelings. People who are depressed usually stop doing things they once enjoyed, like talking to friends or getting projects done around the house.

Depression can feed upon itself, making you feel worse and worse. This Downward Spiral is sometimes caused by stressful events or physical problems.

## Interrupting Depression's Downward Spiral



**It's possible to break Depression's Downward Spiral.**

You can turn it into an upward spiral by:

- ✓ Taking an antidepressant.
- ✓ Getting more active.
- ✓ Doing things you enjoy.
- ✓ Putting a positive spin on your thinking.
- ✓ Improving relationships with friends and family.
- ✓ Establishing a regular sleep pattern.

**What can you do to get better  
when you don't feel like Doing Anything?**

Often when you're depressed, it's easy to stay inside—to withdraw from friends and spend lots of time thinking about problems. We want you to try something different. We believe that you must become active and must be in more positive situations before you begin to feel better. We'll help you focus on things "outside" yourself—like changing how you spend your free time, how you act around others and how you approach tedious tasks. By doing these activities, we believe that you'll begin to feel better. We'd like you to "experiment" with one or more of the following:

- ✓ Getting physically active.
- ✓ Enjoying pleasant experiences.
- ✓ Accomplishing something.
- ✓ Connecting with others.
- ✓ Having fun with others.
- ✓ Create something.
- ✓ Take care of your health.
- ✓ Solve problems systematically by breaking them down into smaller problems.

We'll ask you to "experiment" to see what works best to help your depression and your chronic disease. We'd like you to get specific about what you're going to do.

You'll check the effect of these experiments by monitoring your health. When you find things that work, we'll build on them together. Some of these activities may seem strange or odd at first. We've seen them help other people with complex lives. In fact, we use some of these techniques to help manage our lives.



## Why is there so much emphasis on **Getting More Active**?

Researchers have found that exercise improves mood by:

- ✓ Increasing the levels of neurotransmitters (mood-altering chemicals) that antidepressants target.
- ✓ Increasing blood levels of endorphins, the body's own painkillers, which improve mood and reduce physical pain.
- ✓ Becoming more active often helps people reduce their stress levels and have **more energy**.
- ✓ Physical activity improves the way glucose is used by the body, improves blood lipid levels and helps to reduce blood pressure.
- ✓ Physical activity helps us to lose weight and helps to maintain weight loss.

## What kind of activity is recommended?

We recommend walking. It's an activity that most of us can do. We recommend working towards 30 minutes of walking on most days. If you prefer, we can give you a pedometer to measure your steps. We recommend working towards a goal of 10,000 steps on most days. The keys to increasing your activity are:

- ✓ Choosing an activity that you like.
- ✓ Keeping up with the activity.
- ✓ Knowing that you don't have to "work up a sweat"—walking should be right for you and your health.
- ✓ Start slowly—so that you can keep it up.
- ✓ When you miss exercising for a few days, it's **most** important to start up again.
- ✓ Work with your TEAMcare Study Nurse to figure out an Initial Activity Plan that will work for you.
- ✓ After you start getting more active, we can work together to update your plan as often as you like.

## **How do you decide if you're willing to take an Antidepressant Medication?**

### **How do antidepressant medications work?**

Antidepressants help restore the correct balance of neurotransmitters (brain chemicals).

### **How well do antidepressant medications work?**

Antidepressant medications are all pretty effective. Most people who take antidepressant medications will get better in 4 to 8 weeks. The people who don't improve during the first 8 weeks usually improve with another medication.

Often your friends and family will notice improvements before you do. Usually your sleep and appetite will improve first and your mood, energy and negative thinking will improve later. In addition to improving depression symptoms, antidepressants can help improve sleeplessness and pain. If you have side effects from an antidepressant medication or don't improve, chances are excellent that you will improve on a different medication.

### **What about side effects?**

Side effects usually occur in the first two weeks when taking antidepressants. Side effects can include:

- Nausea
- Headaches
- Jitteriness
- Difficulty sleeping or feeling overly sleepy

**Side effects almost always are decreased within two weeks.**

## **Common Questions about Anti-depressant Medications**

**My problem is sleep.** How can an antidepressant help with my sleep?

- ✓ Often poor sleep is related to major depression. Once the depression lifts, sleep often improves as well.
- ✓ Antidepressants can help restore normal sleep, even in people who do not have major depression. They are better than other sleeping pills in that they are not habit-forming, and they usually do not impair concentration or coordination.

**My problem is pain.** How can an antidepressant help with this?

- ✓ Antidepressants are often used to treat pain--even in people who aren't depressed.
- ✓ Antidepressants may also help restore normal sleep and 'reverse' a vicious cycle of pain and poor sleep.

**My problem is being tired and having no energy.** How can an antidepressant help with this?

- ✓ Low energy and fatigue commonly occur in people with major depression. Once the depression improves, their energy starts to return as well.

**My problem is stress in my life.** How can an antidepressant help with this?

- ✓ Life stress can cause or worsen the symptoms of depression. The depression can then worsen the impact of such stressors (such as work stress, family problems, physical disabilities or financial worries) and your ability to cope with them. Treating the depression can help some patients break out of this vicious cycle.

### **How long will I have to take the medication?**

- ✓ Once you are completely recovered from your first episode of depression, you should stay on the medication for another 6 months to prevent having another depression episode.
- ✓ Some patients who have had depression multiple times or have been chronically depressed for longer than 2 years are at high risk for a recurrence and should take a 'maintenance' dose of antidepressants for longer periods of time.
- ✓ Some people, with a long history of depression, choose to stay on antidepressants for the rest of their lives.

### **Is it safe to take antidepressants together with alcohol or other medications?**

- ✓ Antidepressants can increase the sedating effects of alcohol. Be careful to limit alcohol intake to one glass of wine or beer per day while on these medications.
- ✓ If you start taking a new over-the-counter or herbal medication, let your doctor or TEAMcare Study Nurse know.

### **What should I do if I miss the medication one day?**

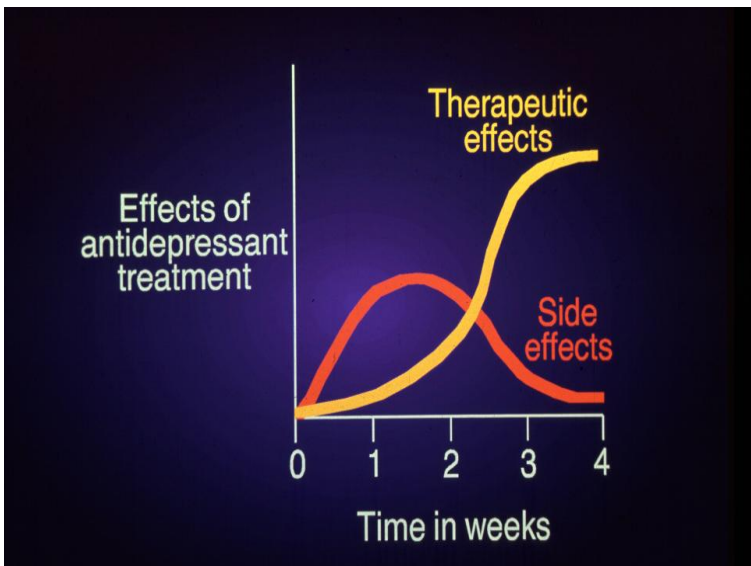
- ✓ Don't 'double up' and take the dose you forgot. Just keep taking your medication as prescribed each day.

### **Will I get better?**

- ✓ With adequate treatment, between 50 and 80% of people will have a complete recovery.
- ✓ Should you not respond to the first antidepressant treatment you try, there is an excellent chance that you will respond favorably to another medication or to psychotherapy.

## Keys to Getting the Best Action from Antidepressant Medications

- Antidepressants aren't addicting—they just help you make more key brain chemicals (neurotransmitters). Some people have been taken antidepressants for up to 30 years without any significant problems.
- Take your medication each day.
- Check with your Physician or TEAMcare Study Nurse before stopping your antidepressant.
- Expect to begin feeling better slowly. The medications may take 2 to 4 weeks to work.
- Medication side effects decrease after 1 to 2 weeks. Call us if you're bothered by side effects—we can often suggest ways to help.
- Keep taking your antidepressant medication even when you feel better.



## Getting a Good Night's Sleep

Depression disrupts your normal sleep pattern. It makes you feel restless because your body is getting mixed messages about whether it's daytime or nighttime. Pain, alcohol or drugs, and late-night coffee can also disrupt your sleep.

### **DO's and DON'Ts for Restful Sleep.**

- ✓ Don't drink caffeine close to bedtime.
- ✓ Don't drink alcohol close to bedtime.
- ✓ Don't lie in bed if you're tossing and turning for more than 20 minutes. Get up & go to another room. Do something quiet and relaxing. When you feel sleepy, go back to bed.
- ✓ Do exercise—but not close to bedtime.
- ✓ Do establish a regular bedtime.

**Set a regular waking time.** Set a regular time that works for you. Keep to it even if you slept poorly the night before.

**Try not to vary your schedule from day to day.** Avoid taking a nap when you're having trouble sleeping at night.

**You may need less sleep.** As we age, we may need less sleep. This amount varies from person to person, but when you get your ideal sleep, you're likely to get up feeling better.

**Antidepressants** can improve your sleep. Some have a sedative effect. All antidepressants can help by increasing the levels of chemical messengers in the brain. This leads to a more restful sleep.

## Relaxing

Sometimes the hassles of everyday life can make you feel tense. Feeling tense can reduce the levels of key chemicals in the brain—worsening depression. Relaxation techniques can help reduce tension—if you find one you like and practice it!

**Deep muscle relaxation** is one way to learn to recognize when you need to relax. Sit in a chair that supports your entire body. First tense your muscles in your shoulders by crunching your shoulders up towards your ears. After 5 seconds, relax the muscles in your shoulders completely—paying attention to how your muscles feel when they're fully relaxed. Tense and relax your face, neck, arms, hands, abdomen, back, buttocks, thighs, calves and feet. Tense and release each area twice before starting on the next area.

**Using your breath** to relax is easy, quick and effective. Let your shoulders drop. Breathe in as slowly and deeply as you can through your nose. Hold your breath while you count to four. Breathe out slowly and completely. Repeat five times.

**Stretching**, by taking a 2-minute stretch break to stretch your neck, back, shoulders and legs, can work quickly to help you relax.

**Imagery.** Think of a time or a situation when you felt relaxed. Close your eyes and imagine that time or place. Think about how it felt and looked.

Other steps to relieve tension include:

- ✓ Taking a walk
- ✓ Listening to music
- ✓ Taking a warm bath or a shower.

## Thinking More Constructively

Everyone has negative thoughts once in a while. If your negative thoughts occur too often, you'll feel down all the time. Here are things you might try:

- ✓ Identify negative thoughts.
- ✓ When you recognize negative thinking, try substituting a positive thought for the negative one. For example, if you take the wrong bus and think "I'm really stupid", you might substitute "now I've really figured out the bus routes".
- ✓ **Remember most negative thoughts aren't rational.** Negative thoughts are often overreactions which impose unrealistic expectations or conclusions.
- ✓ Argue with your irrational thoughts. When you recognize your self-critical thoughts, you can learn to confront them. Think of yourself in a debate with your self-critical thoughts—you can say "that's not true" to an irrational idea.
- ✓ Replace negative thoughts with positive ones.
- ✓ Accept some negative thoughts. Everyone has some negative thoughts. However, you can take back some control over your thinking.
- ✓ Tame your expectations. Often depressed people have extremely high, often unrealistic, expectations and are more critical of themselves than they are of others.

### Ways to reduce negative thoughts:

- ✓ Rubber-band Tweak
- ✓ Thought stopping
- ✓ Set a worry time
- ✓ Buddy "check-in"



## **Ruminating: When You Can't Get it out of Your Mind**

Sometimes we get stuck and can go over and over something bad that's happened. Sometimes it's easy to spend a lot of time worrying about something that may happen in the future. This is called ruminating—like a cow chewing its cud. Painful thoughts and feelings or worrying about things that happened in the past is very common in depression.

Because it's so easy to get stuck in the ruminating process, it's important to gain control over this behavior. There are other choices that you can make.

**First:** Recognize what you're doing. Check if:

- ✓ You're thinking over and over about negative thoughts, feelings or situations.
- ✓ The process of thinking over and over is not helping you feel less depressed, less critical, or more hopeful.
- ✓ The process hasn't helped you solve a problem.

**Second:** Recognize the situation. Are there times or places when you tend to ruminate?

**Third:** Spring into ACTION. The **ACTION Strategy** is described on the next page.



## ACTION Strategy



<b>A=Assess</b>	How will my behavior affect my depression?	
<b>C=Choose</b>	I know that activating myself will increase my chances of improving my life situation and mood. Therefore, if I choose not to self-activate, I am choosing to take a break.	
<b>T=Try</b>	Try the behavior I have chosen.	
<b>I=Integrate</b>	Integrate any new activity into my daily routine.	
<b>O=Observe</b>	Observe the result. Do I feel better or worse? Did this action allow me to take steps toward improving my situation?	
<b>N=Never</b>	Never give up.	

## Managing Your Medications

Most of us have trouble remembering to take our medications, if that's a problem for you, there are some things that we can try:

- ✓ We'll always try to change medications to once a day or twice a day scheduling. It's difficult for everyone to take medications 3 or more times a day.
- ✓ If you have concerns about taking a medication, tell your TEAMcare Study Nurse or Physician.
- ✓ Make sure that we tell you the name of each medication, reason for taking the medication, how to take it (how many times a day and when during the day), how long to take it, and the side effects that could occur.
- ✓ Many of us get advice from our friends or family about medications. Sometimes this creates fears. Please tell us what your fears are so that we can talk about them.
- ✓ Please check with your TEAMcare Study Nurse or Physician before stopping medications.
- ✓ If you are taking many medications, a medication set may help. We have medication sets that we give you and help you learn to use daily.
- ✓ Ways of taking medications can get very complex. We will work to make routines as simple as possible.
- ✓ However, please let us know what is **(and isn't)** working well for you.



## Managing Persistent Pain

### **Is persistent pain a natural part of growing older?**

No. Even though pain is very common, it is not normal or healthy. If pain is interfering with your activities, it should not be ignored or dismissed.

### **Can I take over-the-counter medications for pain?**

Over-the-counter pain medications are safe and helpful to take for mild to moderate pain. If you have pain that lasts more than a few days, or severe pain, please talk with your Primary Care Physician about medication choices.

### **What over-the-counter medicine is best?**

Acetaminophen (Sustained-release or "arthritis" Tylenol) may be the best choice for mild-to-moderate pain, such as osteoarthritis or low back pain. If you use over-the-counter medicines long-term, please check with your Primary Care Physician to make sure your routine is safe.

### **What can I do besides taking medications?**

**Physical activity is extremely important.** Contrary to popular belief that exercise worsens joint pain from arthritis, regular physical activity can improve muscle strength, flexibility, and decrease pain.

### **What if my pain is not relieved?**

Although you may not get complete relief from pain, ***don't give up!*** The most important goal is to have the best quality of life that you can. Discuss persistent pain with your Primary Care Physician and your TEAMcare Study Nurse to help you solve problems and make your treatment plan work best for you.

## Monitoring your Health

As we begin to work together, it's important for us to understand how different treatments are working. You may want to know if a behavior experiment or a medication is working. For example:

- ✓ If you're taking a new antidepressant, how is your mood changing?
- ✓ If you're working to change eating habits, are there certain times of the day that are a problem for you?

In order to make changes in our medication routines or in our lives, it can help to know what we're doing and how we're changing. Many people have success monitoring behavior or measures more often when they're working to change. After a while the change can get so routine, you may be able to manage with fewer monitoring check-ups.

If we're working together to improve your blood pressure or your blood sugar, we'll be asking you to check those measures fairly often. Most people also find it helpful to monitor their mood—by rating their PHQ 9 score.

Keep in mind that this monitoring is to help you and your TEAMcare Study Nurse understand how behavior experiments and medicines are working for you. Monitoring is **not** a report card that labels you or your efforts to change. Monitoring allows you to chart your progress and make changes when necessary.

## Monitoring Your Depression: The PHQ 9

The PHQ 9 is a way that we'll use to follow how you're progressing with your depression treatment. It will also be a way that you can check your symptoms yourself.

Over the <u>LAST 2 WEEKS</u> how often have you been bothered by any of the following problems?	0 = Not at all	1 = Several Days	2 = More than Half the Days	3 = Nearly all the time
1. Little interest or pleasure in doing things				
2. Feeling down, depressed, or hopeless				
3. Trouble falling or staying asleep OR sleeping too much				
4. Feeling tired or having little energy				
5. Poor appetite OR overeating				
6. Feeling bad about yourself or that you are a failure or have let yourself or your family down				
7. Trouble concentrating on things, such as reading a newspaper or watching television				
8. Moving or speaking so slowly that other people could have noticed? OR the opposite - being so fidgety or restless that you have been moving around a lot more than usual?				
9. Thoughts that you would be better off dead or thoughts of hurting yourself in some way?				

Add all the numbers together to get your PHQ 9 score. An ideal goal is to keep your score less than 5 or to keep your score stable. When your score doubles or goes over 10, it's time to get help.

## **Making Choices about Your Health**

### **\*\*For Everyone**

Your TEAMcare Study Nurse wants to help you manage your health. The way you manage will be your choice. Our job is to give you the best information and support so that you make choices that work for **you**.

**Improving your mood:** Depression is common in people with chronic disease. Depression can make it difficult to manage your health. Medications, counseling and physical activity are successful at helping people who are depressed.

1. Increasing your physical activity is very important to helping improve your mood. Getting more active can help your mood and can help your heart disease or diabetes.
2. Taking antidepressant medications makes most people feel much better in 2-4 weeks.
3. Psychotherapy helps most people improve relationships and depression in 6-8 weeks.
4. Working on strategies to improve relationships, problem-solving skills and mood can be helpful.



**On the next several pages, we'll list some choices you can make to improve your diabetes or heart health.** Diabetes and heart disease last for life. Managing them means that you will always make choices, do your best and learn from mistakes. We know you will never be perfect but we want to be your partners to support you as you make choices that can improve your health.

## Making Choices about Your Health

### \*\*For Better Heart Health

Below, you'll see a number of ways that you can improve your health and lower your risk of complications.

**Stop smoking:** If you smoke, stopping smoking decreases your risk of heart attack and early death more than any other treatment. Free & Clear is a Group Health program that can help you prepare to quit, help you manage withdrawal symptoms and help you learn the new behaviors and skills needed to remain tobacco-free. You can register for Free & Clear by calling toll-free: 1-800-462-5327.



**Taking Aspirin:** Taking an aspirin every morning decreases your risk of heart attacks and early death.

**Improving your blood pressure:** High blood pressure increases your risk of an early death. People with heart disease or diabetes who lower their blood pressure to less than 130/80, decrease their risk of having a heart attack or stroke. Exercising and losing weight can help people lower their blood pressure. For most people, medications are needed.



**Lowering your cholesterol.** Changing your eating habits or taking medications can lower your cholesterol level. Diets low in saturated fat or higher in monounsaturated fats improve blood cholesterol. "Statin" medications can lower cholesterol levels and lower your risk of having a heart attack or stroke.



## Monitoring Your Blood Pressure

Our blood pressure varies quite a bit during the day. If you're active, have a cup of coffee or a cigarette, your blood pressure may be higher. When you start working to lower your blood pressure, it's important to have reliable blood pressure measurements. The steps that have been found to be important in getting a reliable blood pressure measurement are:

- ✓ Take the measurement at the same time each day. Most people take their blood pressure in the early morning or in the evening.
- ✓ Don't have a beverage containing caffeine (including coffee, tea or 'pop') for 30 minutes prior to taking your blood pressure.
- ✓ Don't have tobacco or alcohol for 30 minutes prior to taking your blood pressure.
- ✓ Sit in a chair with back and feet supported and your arm bare and supported at about your mid-chest level.
- ✓ Try to take your blood pressure in quiet and calm surroundings.
- ✓ Wait two minutes and repeat your blood pressure. The readings should be very close. If they are very close, write down the second blood pressure number. If the numbers vary by more than 5 points, take a third blood pressure and write it down.
- ✓ Expect that the blood pressures will be different every day.



## **Making Choices about Your Health**

### **\*\*For Better Diabetes Management**

**Getting more Active:** Increasing your activity may help you lower your blood glucose, lose weight and improve your mood.

**Eating Habits:** Most of us eat too much food and weigh too much. Eating smaller portions of food, limiting the amount of saturated fats, or balancing carbohydrate eaten at different times of the day can help you lose weight, improve your blood pressure and improve your HgA1c.

**Improving your Hemoglobin A1c (HgA1c)**—your long-term blood sugar: The lower your blood sugar, the lower your risk of early death, heart attacks, eye disease, kidney disease and nerve disease. For many people, having their HgA1c level about 7 would lead to important health improvements. Getting your HgA1c down to 7 may require working on your eating pattern, getting more active and taking blood-sugar lowering medications. You will need to test your blood sugar to know how well you are doing.

**Finding a medication routine that works for you and following it.** Different medication routines work for different people. The key is working with your medical team to understand how your diabetes medications are working and how they may work differently if you're sick, if your weight changes or if you get more active.

**Take lisinopril:** People with diabetes, who are older than 55 or have high risk of heart attacks, are less likely to have heart attacks, stroke, or develop kidney disease if they take lisinopril. **It's your choice:** we're here to help you!

## **For People with Diabetes: Using Blood Sugar Readings to Manage Medications and Feel Better**



### **Why should I bother testing my blood sugar?**

Everyone reacts differently to diabetes. For some people, a change in exercise and activity or a small amount of a diabetes pill, like metformin, will bring down blood sugar. For others, higher doses of pills or insulin are needed. The best way to tell how the medications are working is by testing your blood sugar.

### **I've just been diagnosed with diabetes. When's the best time to check my blood sugar?**

If you're going to start taking one blood sugar reading a day, we usually recommend taking a morning blood sugar reading. This reading, called a "fasting blood sugar" should be taken before eating or drinking anything (other than water or black tea or coffee).

**How can I use a morning blood sugar to tell how my diabetes medication is working?** Blood sugar readings vary each day. The goal for fasting blood sugar readings for most people is 80-120. If your blood sugar reading is higher than this most days, a change in your medication routine may be needed.

**What does my fasting blood sugar test tell me if I'm taking insulin at bedtime?** The first dose of insulin ordered is almost always too low. Taking fasting blood sugar tests can tell you how well your night time dose of insulin is working. Your TEAMcare Nurse or Primary Care Team may teach you how to use your fasting blood sugar to increase your bedtime insulin dose until you've found the right amount for your body.

## How will I use blood sugar results if I'm taking two doses of long-acting insulin (NPH or Lantus)?

You will use the before breakfast and before bed blood sugar results to see how well your insulin doses are working.



Two before breakfast blood sugar readings in a row give a good idea of how well your **bedtime** dose of insulin is working.

Two bedtime blood sugar readings in a row give a good idea of how well your **morning** dose of insulin is working.



**How about taking tests before meals?** Sometimes it can be very helpful to take blood sugar tests prior to meals. These tests can be used to tell how well your daytime insulin is working or, for people who need meal-time insulin, to predict how much insulin to take for a meal.

**What if I have low blood sugar symptoms:** We'd always like you to take a blood sugar test, if possible, if you have symptoms of a low blood sugar reaction.

**Taking blood sugar tests after meals.** Some people like to take blood sugar tests after eating to see how a particular food changes their blood sugar. We do not recommend testing blood sugars after meals when you're first working to get better control of your diabetes. The results of after meal blood sugar tests can be hard to understand and aren't often as important as other tests.

## For People with Diabetes: What to Do When Your Blood Sugar is too Low

### Who can get low blood sugar reactions?

- ✓ People who are taking insulin or diabetes pills (like glipizide or glyburide).

### How do you feel with low blood sugar reaction?

Symptoms include:

- ✓ dizziness, blurred vision
- ✓ confusion, irritability
- ✓ headache
- ✓ feeling weak or shaky
- ✓ tingly lips, tongue, or fingers



However, these feelings can occur when your blood sugar drops quickly or when other things are going on. How do you know if a low blood sugar is causing your symptoms?

- ✓ If you can, take your blood sugar. If you can't take your blood sugar, you should treat the symptoms.

### How do you treat a low blood sugar reaction?

Eat or drink something with carbohydrate in it. Examples include:

- ✓ 4 oz. fruit juice or **regular** soda
- ✓ 5-6 life savers or 2-3 glucose tablets

**After 10 to 15 minutes, recheck your blood sugar.** If your blood sugar is still low, eat more carbohydrate. **Don't eat protein** to treat a low blood sugar reaction. New research suggests that protein can increase the action of your insulin and can cause blood sugars to go lower.

## What to Do When You're Sick

### What's special about illness and diabetes?

- ✓ Usually, when you're "fighting off" an infection or when you're sick, your blood sugar results will be higher than you'd expect.
- ✓ When you're not feeling well, you may not be able to eat, drink, or exercise as usual.
- ✓ High blood sugars and drinking smaller than usual amounts of fluid can make you very ill.

### What's most important to know about being sick?

- ✓ Take your usual dose of diabetes medications when you're sick.

### Drinking fluid:

- ✓ It's important to try to drink fluids when you're sick. Try to sip at least 8 ounces (one cup) of fluid every hour when you're awake.
- ✓ If you're too ill to eat any regular food and your blood sugars are less than 240, drink non-diet liquid (like *Gatorade* or regular pop).

### When should you call your Primary Care Team?

- ✓ If throwing up and can't take your medication.
- ✓ If you're taking **metformin** and can't eat and drink like normal.
- ✓ If your blood sugar levels are much higher than normal.
- ✓ If you need help figuring out what to do to get feeling better.

## Communicating with Your Doctor

Talking with your doctor can be challenging. We're all busy—sometimes a doctor can seem so busy that you may be hesitant to mention your problems. It's also hard to talk about depression or other medical problems. Five steps can help to improve communication with your doctor.

1. **Come prepared.** Come with a clear objective. What do you hope to get from this visit? It's also useful to make a list of symptoms and questions before you get to the doctor. List your most important concern first. Refer to your notes during the visit.
2. **Ask questions.** In order to make choices about your care, you need to understand what the choices mean.
3. **Discuss problems.** In particular, mention problems that you're noticing with any medication or therapy.
4. **Ask for reading materials.** It can help to review information after leaving your doctor, so you can better understand your care choices.
5. **Ask for your After Visit Summary.** This is a copy of the important information from your clinic visit and often has information about any medications or other treatments that have been ordered.

**These steps** can help you develop a plan for managing your health. Your TEAMcare Study Nurse will help you!

## Using all the Tools: My Group Health

If you have access to a computer and the internet, you can use it to:

- ✓ "Talk" to your TEAMcare Study Nurse. Let your nurse know that you've joined MyGroupHealth. She can send you a note that will allow you to send e mail messages directly back to her.
- ✓ Ask questions of your Primary Care Doctor and you Health Care Team.
- ✓ Look up health information.
- ✓ Refill medications and have them sent to you at home.
- ✓ View your medical record.
- ✓ Request appointments.

MyGroupHealth is private and confidential. Your medical information is secure.

Read the instructions below, then go to [www.ghc.org](http://www.ghc.org).

1. Click on "new to MyGroupHealth? Register now" in the upper left corner.
2. Enter your exact card number (Consumer Number, MyGroupHealth Access Number or ID Number), your last name, and your birth date (make sure you enter a 4-digit year). Click "Submit."
3. Create a private password and memorize it or keep it in a safe place. Click "Submit."
4. You are now a registered member on MyGroupHealth.
5. Log in by entering your card number and the password you just created.
6. Personalize your site by creating a profile. This section is optional.
7. You are now logged into MyGroupHealth. Enjoy!



## **Your Relapse Prevention Plan**

A Relapse Prevention Plan focuses on stress reduction and self-monitoring and can help you to recognize depression early.

**First:** Use the depression-fighting strategies that have worked for you in the past, including taking your antidepressant medication regularly, increasing your pleasurable activities and maintaining a healthy lifestyle.

**Second:** Write down the problems that can trigger your depression and strategies that have helped you in the past.

- ✓ What are some of my everyday stressors?
- ✓ What coping strategies have worked for me in the past?
- ✓ What strategies do I think will be most useful for combating my everyday problems?
- ✓ Are these skills I can use every day or every week?
- ✓ How can I remind myself to use these skills daily?

**Third:** Try to identify three or four specific actions that will help you. Be realistic about what you can and will do.

**Fourth:** Prepare yourself for high-risk situations.

- ✓ What are some problems or predictable stressors that might affect you in the future?
- ✓ Can you do anything to make a particular event less likely or less stressful?
- ✓ If you can't avoid a stressful situation: can you avoid negative reactions (like criticizing yourself) or react in a more positive way?

**Fifth:** Watch for warning signs by regular self monitoring. You can check routinely for personal warning signs or telltale patterns of thought or behavior. You may want to ask a partner or friend to let you know if they notice any warning signs

**Sixth:** Use the PHQ test (page 22) to check your depression score. If your score goes up over 10, it's time to get help again.

## **My Relapse Prevention Plan**

**My depression medications and their doses are:**

1.

2.

**I've been taking these medications since:\_\_\_\_\_**

Most people take antidepressants for at least 6 months. Many take them for many years. If you decide to stop taking antidepressants, please check with your Primary Care Physician about safe ways to decrease the medication.

**My PHQ score today is:**

**In the past, I recognized** that I was depressed because I felt the following symptoms:

1.

2.

3.

✓ If these personal warning signs recur, I will get help!  
My plan for getting help is:

**To reduce stress** and keep daily hassles from adding up, I will:

1.

2.

3.

**Finally, I will remember that I deserve to feel good!**

## **Staying on Track with other Changes**

When we've made changes in our behavior, there's always a tendency to drift back towards old habits.

### **How can you stop the backward drift?**

- ✓ Think about reasons that you might drift. Make a list of reasons that you might not keep up with healthy changes.
- ✓ Keep an eye on yourself. Monitor your behavior enough that you can catch your drift early, before you feel like you're in a deep hole.
- ✓ Keep an eye on your blood work. Tests to check on diabetes control (like hemoglobin A1c) or heart disease risk (like cholesterol tests) are like early warning systems—best done every three months so you can know if you've drifted.
- ✓ If you feel you need to change medications—please call your Primary Care Team. Your Physician or Nurse can help you decide the safest options for medication changes.
- ✓ Use your “coaches” or “partners” to help you realize that you're drifting. Give them specific behaviors that you'd like noticed and ways that you'd like them to give you feedback.
- ✓ Put drift into perspective. We all make plans, but all of us drift away. The key is catching yourself and getting back on track.



## Appendix 3

### TEAMcare -Collaborative Treat to Target Recommendations for Depression, Diabetes and Coronary Heart Disease (CHD) Intervention

**Note:** This tool is adapted from evidence-based clinical guidelines. It does not take the place of medical orders. Changes in medication dosage are documented in EPIC and are signed by the MD. All plans, interventions, and outcomes of medical care must be appropriately documented in EPIC.

**Eligibility Criteria:** Patients can be included if: they're currently enrolled in GHC (and have been for the past 6 months), they are 18-80 years old, have diagnosis codes for diabetes or coronary heart disease, have at least one measure of poor disease control (LDLc > 130 mg/dl, BP > 140/90 mm Hg or HbA<sub>1c</sub> ≥ 8.5%) and meet criteria for depression (PHQ-9 ≥ 10).

**Exclusion Criteria:** Patients are excluded if their systolic BP >200 mm Hg or their diastolic BP > 115 mm Hg; if they have ICD 9 codes indicating alcohol or substance abuse, bipolar disease, schizophrenia, or end-stage renal disease (dialysis); are taking antipsychotic medications or lithium; are enrolled in Hospice or are living in a SNF. or are currently managing by the Clinical Pharmacists (metformin therapy, lipid therapy or BP therapy).

#### 1) Nurse Care Manager (NCM) Interventions for all patients to include:

- \_\_\_\_\_ Encourage patient to sign up for electronic messaging with their primary care team for MyGroupHealth (i.e. electronic communication with physician).
- \_\_\_\_\_ Encourage Medication Adherence, by discussing medication's desired effect and dosage when first ordered and by inquiring about side effects and adherence at each visit and encouraging the use of medication reminder tools.

### BEHAVIORAL ACTIVATION FOR HEALTHY LIFESTYLE CHANGES

#### Smoking Cessation. Goal: Quit.

- **NCM** to discuss behavioral activation and smoking cessation strategies.  
**NCM** can refer to smoking cessation program.

**Nutrition** Goal: maintain weight or 5% weight loss initially (if overweight), progress to greater weight loss if needed and able; self-described decrease in intake of saturated fats, sweets, and salt and a diet high in fruits, vegetables, whole grains and nonfat dairy products.

- **NCM** to discuss Healthy Lifestyle changes and their anticipated effects (including the importance of small amounts of weight loss on insulin action), patient interests and readiness to change, and past lifestyle efforts. Brainstorm options w/patient and problem-solve ways to improve nutritional pattern. Details of this discussion incorporated into "My Better Health Plan."

**STEP 1:** Salt restriction, DASH diet, or ADA, AHA, Mediterranean diet, Weight Watchers **OR** other "healthy plan" that patient has had success with in the past or is ready to try.

- **NCM** to discuss behavioral activation strategies, "emotional eating", GHC-supported programs (RD consult or Take Charge if > 20 pounds overweight or Weight Watchers).
- **NCM** to encourage use of diet diary and daily weights.

**STEP 2:** Carbohydrate counting to be considered when patient beginning on daytime insulin with Aspart given before lunch and dinner.

\_\_\_\_\_ **Physical Activity** Goal: increase in current activity, as able, to 30 minutes walking/day or equivalent **OR:**

- **NCM** to elicit patient's current activity level, past lifestyle change efforts, patient interests and readiness to change. Brainstorm patient options and problem-solve ways to increase physical activity. Details of this discussion incorporated into "My Better Health Plan".

**2) Blood Pressure Goal:** BP < 130/80 mm Hg or \_\_\_\_\_.

- **NCM** to teach home blood pressure monitoring using optimum technique and ask patient to take BP daily when titrating medications (or weekly→monthly when medication titration completed).
- **NCM** to discuss indications, benefits and risks of antihypertensive therapy & when to call **PCP Team** (If dizzy or SBP < 110 mm Hg), and **CNS** (concerns after hours or weekends).
- **NCM** to order K<sup>+</sup> after 2 weeks if using diuretics or K<sup>+</sup> & SrCr after 2 weeks if using ACE inhibitor.
- If ACE inhibitor is not tolerated or patient complains of cough, **NCM** to use GHC HTN Guideline for "Management of Cough Accompanying ACE Inhibitors" for follow-up care discussion with PCP.
- **NCM** to consult with TEAM Care Consultants and PCP if starting antihypertensive medications for patients with evidence of heart failure.
- If starting Beta Blocker, **NCM** to teach patient to check pulse. If pulse rate < 60, teach patient to hold the Beta Blocker and call PCP team.

**STEP 1**

\_\_\_\_\_ **Prinzide** 10mg lisinopril/12.5mg HCTZ. ½ pill/day X 2 weeks; 1 pill/day for 2 weeks; 2 pills/day X 2 weeks (diabetes and no evidence of CHD) **OR**

\_\_\_\_\_ **Atenolol** 25mg. ½ pill/day X 1 week; 1pill/day X 1 week; 2 pills/day X 1 week (CHD).

**STEP 2:**

\_\_\_\_\_ **Add Atenolol** 25mg. ½ pill/day X 1 week; 1pill/day X 1 week; 2 pills/day X 1 week (if not previously started) **OR**

\_\_\_\_\_ **Add Lisinopril** 10mg. ½ pill/day X 2 weeks; 1 pill/day for 2 weeks; 2 pills/day X 2 weeks (if not already on Prinzide)

**STEP 3:**

- Consult with TEAMcare supervisors, consultants and PCP for follow-up orders if needed to bring BP to goal.

**3) Cardiac Risk Reduction. LDLc < 100 OR \_\_\_\_\_.**

\_\_\_\_\_ **Lisinopril** 20mg, ½ pill/day X 2 days; then 1 pill/day

**Order:** K<sup>+</sup>, SrCr initially and 2 weeks after goal dose reached, then yearly.

- **NCM** to discuss medication adherence, side effects, and when to stop medication and call (hives or dizzy standing).

\_\_\_\_\_ **Lovastatin** For all patients with diabetes ≥55 or patients with ASCVD (peripheral arterial disease or CHD). If LDLc < 140 mg/dl, 20mg in pm w/food. If LDLc > 140 mg/dl, 40 mg in pm w/food.

- Order: lipid panel (non-fasting OK if pt. unable to have fasting level drawn), K<sup>+</sup>, AST @ 4 weeks, then AST every 6 weeks until reaches target, then fasting lipid panel yearly.
- **NCM** to discuss medication side effects, and when to stop medication and call (muscle aches). **NCM** to order CPK and cc chart note to **PCP** if lovastatin stopped due to muscle aches.

\_\_\_\_\_ **ASPIRIN** ASA enteric coated 81 or 325, mg/day (unless contraindicated)

**4) Glucose Goal:** Weekly average or pre-meal FBG 80- 120 **and** HbA<sub>1c</sub> < 6.5% OR \_\_\_\_\_.

- **NCM** to discuss Healthy Lifestyle changes and their anticipated effects, past lifestyle efforts and assess patient interests and readiness to change. Details of this discussion incorporated into My Better Health Plan.

#### **Hypoglycemic Medications**

- **NCM** to teach blood sugar monitoring technique and when to call **PCP** (if significant hypoglycemia symptoms, ff BG < 70 or concerns) and when to call **CNS** (if concerns or hypoglycemia after hours or on weekends).
- **Order:** HbA<sub>1c</sub> quarterly, SrCr

#### **STEP 1: Metformin**

**Indications:** Patients with type 2 diabetes who are doing the best they can with lifestyle changes and have HgA<sub>1c</sub> and BG levels that exceed targets.

- **NCM** to discuss side effects, their usual course and ways to manage them.

**Contraindications:** Metformin should not be prescribed if SCr >1.5 mg/dL, creatinine clearance <50 mL/min, age >80, or if patient is a frail elder, abuses alcohol, has severe CHF, or has progressive liver disease.

\_\_\_\_\_ **Standard Metformin Titration.** 250 mg/day with dinner X 2 days. Then 250 mg twice daily, with breakfast and dinner, for 2–3 days. Then 500 mg twice daily, with breakfast and dinner, for 2 weeks. Titrate metformin slower if GI side effects.

\_\_\_\_\_ **Continued Metformin Titration.** Take 1000mg Metformin twice daily.

If patient has diarrhea when taking metformin, **NCM** may substitute Metformin in liquid preparation.

#### **STEP 2: Initiation of Late Evening Insulin**

**Indications:** Patients with type 2 diabetes who are doing the best they can with lifestyle changes, are taking full therapeutic doses of metformin and who haven't reached target FBG or HbA<sub>1c</sub> targets.

\_\_\_\_\_ **Metformin:** Continue at current dosage if appropriate and tolerated, **OR:**

\_\_\_\_\_ **Initiation of Late Evening Insulin.**

- Teach patient to prepare and inject NPH insulin. Discuss expected action of NPH and when to inject evening insulin (8–9 hours before usual wake-up time). Review symptoms of and treatment of hypoglycemia.
- **Stop insulin titration and discuss with PCP if:** patient has symptoms of hypoglycemia that accompany a low blood glucose level.
- Send a cc'ed chart to **PCP** if patient reaches a dose of 50 units NPH. For doses of 50 units or more, better and more predictable absorption may be achieved by having patient divide the dose and inject half in one site and half in another site.

**HS Insulin dosing** (as below) **OR** \_\_\_\_\_.

- For patient <200lbs and FBG <200. Begin with 12 units NPH q.h.s
- For patient <200lbs and FBG >200. Begin with 16 units NPH q.h.s
- For patient >200lbs and FBG <200. Begin with 20 units NPH q.h.s.
- For patient >200lbs and FBG >200. Begin with 30 units NPH q.h.s.
- Increase evening NPH dose by 2 units/2 days until am FBG target reached.
- When patient reaches FBG target, encourage them to test BG at least two times pre-lunch, pre-dinner and HS in one week. These results can help determine if daytime insulin is needed.

#### **STEP 3: Initiation of Daytime Insulin**

**Indications:** Patients with type 2 diabetes who: are doing the best they can with lifestyle changes, are taking full therapeutic doses of metformin, and are taking evening insulin doses high enough to result in target FBGs, but continue to have HbA<sub>1c</sub> and blood sugar levels that exceed targets.

- These insulin dosages are to be given in addition to maintenance HS insulin.
- **NCM** to encourage patient test FBG q.d. and ac meals when titrating insulin or at least 4 pre-lunch, pre-dinner and h.s. tests/week.

**A) Preferred option: Aspart (Novolog) Before Lunch and Dinner**

**Rationale for Use:** While this approach is more complex than simply adding NPH at breakfast, it may improve overall HbA<sub>1c</sub> with less weight gain and less hypoglycemia.

**Requirements for Managing This Insulin Pattern:**

- This dosing regime works best when the patient is willing and able to count meal carbohydrates, as this increases likelihood of getting the most accurate pre-meal Aspart dose requirement. If a patient is unable or unwilling to count carbohydrates, then the simple titration scale (below) should be used.
- Have patient report blood glucose data every 2-4 days after this insulin dosage pattern is begun to assure that titration pattern is working well.

**A-1) Sophisticated Titration of Aspart (Novolog)** for the patient who's able to CHO count. All Aspart should be taken immediately before beginning to eat a meal.

Blood glucose 70-130: 1 u Aspart for every 15 grams of anticipated CHO intake.

Blood glucose 131-160: 1 u Aspart plus 1 unit of Aspart for every 15 grams of anticipated CHO intake.

Blood glucose 161-190: 2 u Aspart plus 1 unit of Aspart for every 15 grams of anticipated CHO intake

Blood glucose 191-220: 3 u Aspart plus 1 unit of Aspart for every 15 grams of anticipated CHO intake.

Blood glucose 221-250: 4 u Aspart plus 1 unit of Aspart for every 15 grams of anticipated CHO intake.

Blood glucose over 250: 5 u Aspart plus 1 unit of Aspart for every 15 grams of anticipated CHO intake.

\*\*\* If patient is quite insulin resistant (requires 50 u HS NPH or more), may begin Aspart dosage at 1 u per 10 grams of anticipated CHO intake.

**NCM** may increase pre-meal Aspart by 2 units/week as needed to reach targets.

**A-2) Simple Titration of Aspart (Novolog)** for the patient who's unable or unwilling to CHO count.

- **NCM** to review patient's dietary pattern (usual intake, predictability of meal times and "usual" CHO intake). If patient willing to eat predictable pattern of meal CHO intake or willing to eat "large and small" CHO meals, **NCM** can use CHO intake pattern to craft a Aspart schedule as follows.

Blood glucose less than 80mg/d: eat first, then take Aspart for estimated CHO intake at the end of the meal

Blood glucose 80-150: Aspart for estimated CHO intake immediately before meal.

Blood glucose 151-200: 1 u Aspart plus Aspart for estimated CHO intake immediately before meal.

Blood glucose 201-250: 2 u Aspart plus Aspart for estimated CHO intake immediately before meal.

Blood glucose 251-300: 3u Aspart plus Aspart for estimated CHO intake immediately before meal.

Blood glucose over 300: 4u Aspart plus Aspart for estimated CHO intake immediately before meal.

\*\*\*Aspart (Novolog) dose based on giving one unit Aspart per 15 gms of anticipated CHO intake in their usual meal and one unit Aspart per every 50 mg/dl BG >150.

**Follow-Up Titration (if needed)**

- If pre-dinner or h.s. BGs remain elevated, add an additional 2 units Aspart for every 50 mg/dL that the pre-meal BG is above 150.

- If pre-dinner or h.s. BGs remain elevated, titrate the pre-lunch and pre-dinner Aspart up to 2 units per 15 grams carbohydrate.

**B) Alternative: Daytime NPH**

**Indications:** This insulin regime can work for patients who are unable to count CHO's or eat predictable amounts of CHO's. However, daytime NPH tends to cause weight gain and can make people hungry and hypoglycemic in the middle of the day. When taken in the a.m., the regimen usually requires that the patient does not omit or delay lunch.

**B-1) \_\_\_\_\_ Daytime NPH and Aspart (Novolog) Before Dinner**

**Indications:** This routine can decrease the total dose of NPH needed in the a.m. and lessen the risk of mid-day hypoglycemia.

\_\_\_\_\_ Begin dosage at one-half the h.s. dosage. Increase by 1–2 units every 2–4 days until pre-lunch BG range is within target.

\_\_\_\_\_ If h.s. BG still exceeds target range, add sliding scale Aspart before dinner (as above).

**B-2) \_\_\_\_\_ Initial Titration of a.m. NPH:** dosage equal to one-half the h.s. dosage. Increase by 1–2 units every 2–4 days until pre-lunch BG range is within target.

**5) Depression.** Goal: PHQ 9 < 5, or at least 50% decrease from baseline in PHQ 9.

- **NCM** to encourage patient to fill out PHQ 9 weekly until reaches a “steady state”, then prn.
- **NCM** to discuss behavioral activation methods, medication adherence strategies, rationale for initial and long-term maintenance therapy with antidepressants (Don't decrease dose or stop without checking with NCM or PCP; take regardless of symptoms) and side effects (most disappear @ 2 weeks).
- **NCM** to contact PCP and team psychiatrist if patient has: acute suicidal symptoms, psychotic symptoms, manic symptoms, severe lack of appetite with insufficient oral intake or weight loss, suspected alcohol or drug misuse or severe medication side effects.
- Create “My Best Health Plan” initially and update at each visit.

**Antidepressant Medication**

\_\_\_\_\_ **Citalopram** 10 mg/day X 1 week; then 20mg/day X 1 week. If PHQ 9 hasn't decreased by 50% or more, increase to 30mg/day. At week 4, if PHQ 9 hasn't decreased by 50% or more, increase to 40mg/day.

\_\_\_\_\_ **If two or more negative SSRI trials** or for those patients w/preexisting diabetes-related sexual dysfunction, start Bupropion SR 100mg/day for 1 week; then 100mg 2X/day for a week; then 200mg in am & 100mg in PM. If PHQ 9 at 4 weeks isn't decreased by 50%, increase dose to 200mg BID.

\_\_\_\_\_ If patient doesn't fit above criteria, if has severe diabetic neuropathy or significant medical or psychiatric symptoms, antidepressant medications to be suggested by Team Intervention Psychiatrist or PCP.



## **Appendix 4: Description of Medication Classes for Antihypertensives, Glycemic Control, Hyperlipidemia, and Depression**

Using GH automated pharmacy prescription data, five medications classes were included for hypertension (ACE inhibitors/angiotensin receptor blockers; diuretics, *B*-adrenergic blockers, calcium-channel blockers and other); four for diabetes (metformin, sulfonylureas, thiazolidinediones, and insulin); five for hyperlipidemia (statins, fibrates, bile acid resins, ezetimibe, and niacin) and seven for depression (serotonin reuptake inhibitors, bupropion, serotonin norepinephrine reuptake inhibitors, trazodone, tricyclics, antipsychotics, and anti-anxiety medications).

## **Appendix 5**

Costs for intervention services provided by study staff (including supervision) were calculated using actual salary and fringe benefit rates plus a 30% overhead rate (e.g. space, administrative support). Resulting unit costs were \$79 for each in-person nurse visit (typically 30 minutes) and \$31 for each telephone contact (typically 10-15 minutes). These estimates included time required for outreach efforts and record keeping (e.g. approximately 45 minutes of nurse time was allowed for each 10- to 15-minute telephone contact). Intervention costs also included a fixed \$100 for each participant assigned to the intervention program for costs of supervision and information system support.

## Appendix 6

The definition of the *Cohen d* effect size that was use for the depression outcome is the difference in change from baseline to 12 months in the intervention and usual care groups divided by the pooled baseline standard deviation. Thus, a *d* of 0.25 indicates that one-quarter of a standard deviation separates the two means. This is a useful method to compare the effect of an intervention across studies when different measures (such as different depression scales) are used. Cohen has suggested that an effect size of 0.20 would be considered small, 0.50 medium and 0.80 large.

Cohen J: Statistical Power Analysis for the Behavioral Sciences. 2<sup>nd</sup> Edition. Hillsdale, NJ: Lawrence Erlbaum, 1988.

## **Appendix 7**

Intervention versus control differences at 12 months on percent of patients below American Diabetes Association Guidelines on HbA<sub>1c</sub> <7.0%, SBP <130 mm Hg, and LDL <100 mg/dl: 16.3% of intervention patients vs. 12.5% of usual care patients had all 3 disease control measures below ADA guideline values, which was not significant.

## Appendix 8

Nurse Mean Number of Process of Care Interventions for each patient in 12-month period (N = 106)*	
Discussed Adherence	Mean (SD)
Antidepressants	4.4 (3.1)
Antihypertensives	3.9 (3.1)
Oral hypoglycemics	3.1 (3.2)
Statins	3.7 (3.1)
Insulin	2.3 (3.0)
Discussed Adding New Medication	
Antidepressants	1.2 (3.1)
Antihypertensives	0.4 (0.82)
Oral hypoglycemics	0.2 (0.5)
Statins	0.3 (0.5)
Insulin	0.2 (0.5)
Discussed Medication Increase	
Antidepressants	2.9 (2.4)
Antihypertensives	1.0 (1.5)
Oral hypoglycemics	0.4 (0.8)
Statins	0.2 (0.6)
Insulin	1.5 (2.8)
Discussed Medication Side-Effects	
Antidepressants	0.6 (1.2)

Antihypertensives	0.1 (0.5)
Oral hypoglycemics	0.2 (0.9)
Statins	0.03 (0.2)
Insulin	1.0 (2.0)
Discussed Stopping Medication	
Antidepressants	0.5 (0.9)
Antihypertensives	0.3 (0.6)
Oral hypoglycemics	0.3 (0.5)
Statins	0.1 (0.4)
Insulin	0.1 (0.4)
Discussed Lifestyle Changes	
Cessation smoking	1.1 (2.9)
Increase exercise	5.9 (4.6)
Changing nutrition	7.3 (5.6)
Home blood pressure monitoring	16.6 (10.7)
Changing glucose monitoring	17.8 (11.6)
Other Behavioral Issues	
Diabetes education	5.0 (5.7)
Depression education	3.6 (2.8)
Pleasant event scheduling	5.8 (5.4)
Psychosocial crisis counseling	4.9 (7.2)
Interpersonal issues	19.7 (10.5)
Sleep problems	5.0 (4.8)

Chronic pain management	2.7 (4.5)
Disease crisis management	2.6 (3.6)
Review lab results	5.2 (2.6)

\*Based on chart review by registered nurse of all nurse case manager notes

## Appendix 9 Adverse Events

	Intervention	Usual Care
Deaths	1(0.9%)	2 (1.8%)
Severe Adverse Event (percent with $\geq 1$ hospitalization)*	27 (25.5%)	23 (21.3%)
Percent with $\geq 1$ moderate adverse event <sup>†</sup>	18 (17%)	3 (2.8%)
Percent with $\geq 1$ mild adverse event <sup>†</sup>	2 (1.9%)	0 (0%)

\* This severe adverse event measure only included hospitalizations; automated Group Health data was used to monitor hospitalizations.

<sup>†</sup>Mild and moderate adverse events included events not requiring hospitalization such as a falls, medication side effects, or an extremely high laboratory or clinical result (such as HbA<sub>1c</sub>, level >10.0%, a systolic blood pressure level >180 or diastolic >120 or a severe symptom requiring an urgent or emergency room visit such as chest pain or neurological symptom). These events were much more likely to be ascertained in the intervention patients due to the close follow-up by study nurse care managers. The mild to moderate rating was based on a judgment decision by an experienced study clinician rather than explicit operational criteria.



## Appendix 10

Physicians may have presumably learned skills in treating an intervention patient that they applied to controls. We examined clustering of patients within physician. Overall, there were 1.4 patients per primary care physician (151 physicians participated and 214 patients were randomized). A total of 57 (37.7%) physicians had more than one patient randomized, but only 44 (29%) had both an intervention and control patient enrolled. Of these 44, only 28 (18.5%) had an intervention patient enrolled first, followed by one or more control patient. Thus, only 18.5% of physicians could potentially have applied skills they learned from having an intervention patient enrolled to a control patient. At the patient level from these 28 physicians, there are 47 control patients who were randomized with a provider who already had an intervention patient (i.e. approximately 22% of 214 patients randomized).

Given the small degree of clustering of patients within providers, it is very unlikely that within provider clustering of patients would affect our variance estimates. It is also unlikely that treating one intervention patient would lead to skill acquisition. Finally, this potential skill acquisition would lead to conservative bias to our findings since it would potentially narrow intervention versus usual care differences.